THE JUNIOR INSTRUCTOR

VOLUME TWO

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(2nd Grade)

THE JUNIOR INSTRUCTOR

FOR THE PARENT AND CHILD

IN TWO VOLUMES

PROVIDING FOR HOME INSTRUCTION IN HARMONY WITH SCHOOL METHODS, AND HAVING THE PURPOSE OF BRINGING THE HOME AND SCHOOL INTO CLOSER RELATIONS WITH EACH OTHER

CONTAINING SUGGESTIONS AND METHODS PREPARED ESPECIALLY FOR IT BY NOTED WRITERS AND SPECIALISTS IN THEIR VARIOUS DEPARTMENTS

VOLUME TWO

Only the best is good enough for the child—*Goethe.*

EDITED BY
WALTER J. BEECHER
GRACE B. FAXON
Editors Practical Methods, Aids and Devices for Teachers

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The Junior Instructor

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THE CHILDREN'S GARDEN

By EBEN E. REXFORD, Author of "Home Floriculture," "Grandmother's Garden," "The Home Garden," "Amateur Gardencraft," "Four Seasons in a Garden," etc.

What to Grow and How to Grow It

ALL WORK and no play makes Jack a dull boy" is a saying as old as any of us are, and there is a great deal of truth in it; but there is a certain kind of work which can be made fully as interesting as play by the boy or girl who likes to do things that combine amusement and profit. In fact, so interesting can gardening be made to the child who loves to see "the green things growing" that the work part of it is lost sight of almost wholly. I know of nothing more fascinating to the lover of nature than putting seed into the ground and watching the various processes of plant development from the tiny seedling to the full-grown plant. In doing this we put ourselves into companionship with the great teacher who knows how to make her lessons so delightful that it seems like reading a story whose interest does not flag, and from which we learn many things that are not taught in books made by men,—Nature's books, illustrated by their author, and bound in the green and gold of growing things and sunshine.

I know that the boys and girls of today would not take very kindly to the old-style gardening, which was made up largely of unpleasant work. Most of it had to be done by hand, and in such a manner that pleasure was almost entirely eliminated. Weed-pulling was akin to punishment. In fact it *was* punishment, of a kind that boys and girls of a past generation escaped from whenever possible. In pulling weeds by hand they might not know for what misdeeds they were paying penalty, but they could not get rid of the idea that it *was* a penalty, and as such they rebelled against it.

But, fortunately, this kind of gardening has been largely done away with. Now-a-days, by the use of machinery and tools calculated to lessen labor, the drudgery of garden work is no longer a bugbear to the child who has a liking for growing things. Hence we find the garden capable of affording a vast amount of pleasure as well as profit, and we bring to it a real enthusiasm which grows stronger year by year. Soon the gardening habit becomes fixed, and we look forward eagerly to the making of our garden after the long and dreary winter. We have the cultivator which makes rapid and easy

A Proud Little Farmer

work of weeding, and leaves the soil in just the condition necessary to satisfactory growth. Then we have the weeding-hook, with which more small weeds can be disposed of in an hour's time than in all day when they have to be pulled by hand; and the use of this little tool—which can be bought for ten or fifteen cents—stirs the soil quite as effectively as a hoe. These things simplify work in the garden to such an extent that the old-time dislike for it gives place to a pleasure that makes genuine fun out of it.

In cultivating a garden, on ever so small a scale, boys and girls may learn more about plants and their development than it is possible for them to learn from books. Here they discard theories for facts, and object lessons take the place of words whose meanings are not always clear to them when seen on the printed page. Nature not only shows them what can be done, but tells them *how* it is done, and takes them into partnership with herself. She allows them to help her in the performance of some of her many miracles of growth, and in this way Nature and the child form a friendship which is as lasting as it is profitable.

I would like to have every boy and girl the owner of a garden. Size is not a matter of great importance. Many things can be grown in small space, and great knowledge can be gained from a bit of ground a few feet square. Success and profit come from three things:

A careful preparation of the soil.

The use of good seed.

Proper care of the vegetables and flowers one attempts to grow.

Therefore if you can have only a small garden, make the most of it by putting it in the right condition for the plants, and by giving them the best possible care. In other words, do thorough work in your garden, be it large or small. Half-hearted gardening is worse than no gardening at all, as it results in comparative failure and discourages further attempts along this line. When we grow things well we are encouraged to try to grow them better next year, and the habit of doing one's best is formed in a manner that applies to other things than gardening.

PREPARATION OF THE SOIL

A proper preparation of the soil for the reception of seed is a matter of prime importance. It must be fine and mellow, and contain nutriment enough to furnish the plants with all the food necessary to develop them fully. Few soils are rich enough to do this without the addition of some good fertilizer, therefore some kind of plant-food must be applied to the soil. Success depends largely on giving plants a good start, and then keeping them going steadily ahead until they have completed their growth. This can be done only by the liberal use of reliable fertilizers, the best of which is old, well-rotted manure from the cow-yard. Whenever it is possible to obtain this I would advise its use in preference to anything else, as it contains the elements of healthy plant-growth in a greater degree than any other fertilizer, and it seems to be specially adapted to all the plants one is likely to grow in the ordinary garden. Make generous

A Fine and Varied Collection of Squashes

Two Enthusiastic Young Gardeners Who Grow Vegetables and Flowers on the Same Plot

use of it. Spread it over the soil before spading, and work it in so thoroughly that there is a perfect union of both. Never allow it to remain in lumps as this results in an uneven distribution of its richness. If barnyard manure is not to be had, finely ground bonemeal is a good substitute. This contains many of the elements of plant-growth, is not expensive, and is easily applied.

It is impossible to say just how much should be applied to the native soil, because soils vary a great deal in quality, but the boy or girl gardener can find out what quantity to use by interviewing some person who has established a reputation for good gardening. He will take pleasure in advising them in this matter. Be sure that you get the *fine* bonemeal if you want your plants to get the benefit of it early in the season, for the coarse article is a long time in dissolving sufficiently to give off its nutritive qualities.

A plow can seldom be used advantageously in a small garden, such as most children will be likely to undertake; therefore spading will be the proper thing. Drive the spade in its full depth, and throw up the soil in clods. Leave these as they fall for several days, before attempting to pulverize them. If left exposed to the disintegrating influence of sunshine and air they will speedily part with the moisture they have absorbed from melting snows and early spring rains, and soon be in a condition to crumble under the application of the hoe or the iron rake. But do not expect this mellowness to result from the first treatment. It may be necessary to go over the ground several times before it is sufficiently pulverized to be in fit condition for the reception of seed. Be sure to work into it, as it undergoes the pulverizing process, whatever fertilizer you have decided on using. This is a matter of great importance.

GOOD SEED

I have elsewhere said that the selection of good seed is one of the important items of successful gardening. Almost any kind of seed that is thoroughly ripened will grow good-sized vegetables and thrifty flowering plants, but success in the best meaning of the term is more a matter of quality than quantity. In order to give the best satisfaction, the vegetables we grow must have a superior flavor, and our flowers must be rich in color and refinement. In order to secure such results we must make use of seed which has been grown for the express purpose of making it possible for the gardener to grow the best of everything adapted to garden culture. This cannot be done when the seed we use has been saved from plants that have been allowed to "mix" to such a degree that distinctive qualities have been lost. It is absolutely necessary to invest in the very best seed if we would grow the very best plants.

WHEN TO BEGIN GARDEN WORK

There is such a thing as being in too great a hurry to "make garden." It seems to be one of the results of early spring to start the gardening impulse into activity, without regard to weather or soil conditions. We let our enthusiasm get the better of us, and begin work long before it can be done to advantage. If we spade the ground and sow seed before conditions are favorable to healthy growth, we will be likely to find out, a little later on, the truth of the old saying that "haste makes waste." For work that is done before conditions *are* favorable may have to be done over again. Therefore do not begin work in the garden until the excessive moisture from rain and snow has had ample opportunity to drain away. A soil that is heavy with water can not be put into proper condition at once for the reception of seed. If seed is sown before the soil is properly mellowed, and before the sunshine has had time to warm it, it often fails to germinate. If a few plants do grow, they will be so lacking in vitality that they will not compare with those from seed sown later in the season, when the ground is in good condition. Therefore wait for warm weather before making your garden if you want best results, as every good gardener does.

Delivering the Thanksgiving Dinner

LAYING OUT THE GARDEN

Some amateur gardeners seem to think that every garden ought to be laid out according to a specific plan, very much the same as a house is built. My experience is that not one person in a hundred ever follows the plans that are frequently given in the garden magazines. No two gardens are alike in size or shape, and it is impossible, in most instances, to make use of these plans without so modifying and changing them that but little is left of the original. I think it advisable to let the amateur gardener design his own garden. That is part of the delight of gardening. The more originality you put into the arrangement of it the more pleasure you will get out of it. It will be *your* garden—not simply a copy of some one else's idea of a garden. Of course there should be some sort of system in the work. Aim to economize space, and so to arrange the plants which you grow that they will not interfere with each other. Do not plant large growing kinds where they will shade those of low growth. Have the larger ones at the north, and graduate the others toward the south in such a manner that all of them can get the benefit of the sun. If you are not familiar with the habits of the plants you propose to grow, read over the descriptions in the catalogues carefully before planting, or ask advice from experienced gardeners. If you do this you will not be likely to get any plants where they do not belong. I would not advise making beds for plants, as we used to do. If planted in rows it will be much easier to take care of them, as the garden cultivator can be operated much more rapidly and easily when it is not necessary to make frequent turns.

WHAT TO GROW IN THE VEGETABLE GARDEN

I would not advise you little folks to attempt to grow many kinds of plants until you have had some experience with the common varieties. If you are successful in their cultivation, next year you will be justified in adding others to the list. Bear in mind what I have said about quality as being of more importance than quantity, and concentrate your efforts on a few varieties, with a view to growing them well. They will afford a great deal more pleasure than a large number of poorly grown ones. Aim to have only as many as you feel sure of being able to give all the care they need.

Would you like a few hills of potatoes in your little garden? Then make the soil in which you plant them deep and rich. Cover the seed to the depth of four or five inches, putting four or five pieces in each hill. Cut the potato from which you get your seed in such a manner that each piece has an "eye" or growing point on it.

Beans are of easy culture. Plant in rows two feet apart, sowing the seed rather thickly, and covering it with an inch or two of soil. Beans of climbing habit should have some kind of support given them as soon as they begin to develop vines.

Beets should be sown in rows. Sow thickly, and let the housewife use for greens the seedlings that have to be "thinned out" when a month or six weeks old.

Cucumbers should be planted in hills at least a yard apart. Have the soil very rich. Put half a dozen seed in each hill, and cover with an inch of

Pansies Never Lose Their Interest for Children

soil. Keep close watch of the young plants. A beetle will spoil them if you do not prevent him from getting a taste of them. As soon as the first one is seen sprinkle dry wood ashes over the young plants, or make a covering of wire netting and place it over the spot where the seed is, before it germinates. This is the best plan, as it heads off the beetle most effectively.

The carrot is a plant that you will take pleasure in growing because of its easy culture and its attractive appearance. Its foliage is as finely cut as that of a fern, and makes this plant one that can be used with fine effect in the flower garden.

A few onions should be grown to furnish flavoring for soups and salads. Plant in rows. Sow thickly, and thin out as they increase in size.

I would advise a half-dozen tomato plants if the garden is large enough to accommodate them. These I would train on a rack or trellis, to prevent the fruit from coming in contact with the earth. If allowed to touch the ground it often decays at the point of contact. Cut off the ends of the main branches as soon as several clusters of fruit have "set." This will throw the strength of the plant into the development of the fruit that has formed, and you will be delighted with the size and attractive appearance of it, as compared with that borne on vines that have been allowed to ramble all over the trellis or ground and "set" fruit to suit their own idea of the fitness of things.

Summer squash hasn't a great deal of nutriment in it, but it has a taste that is pleasant to the palate, and I would advise a few hills of it. Plant it in the manner advised for cucumbers, and treat it in the same way if the beetle attacks it.

There ought to be a few plants of parsley and a row of spinach. Both of these plants are of the easiest culture.

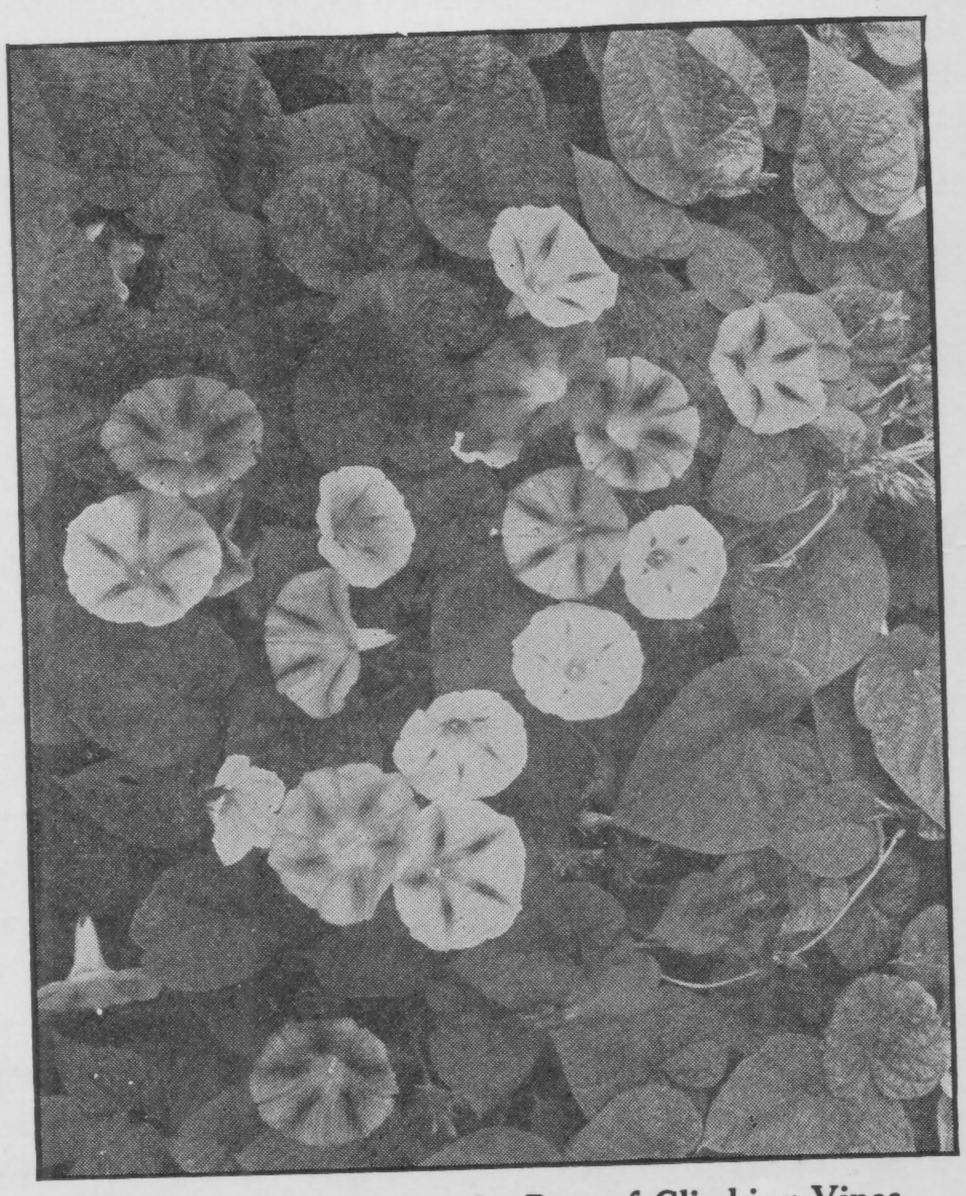
Of course there are other plants that children can grow but, as I have already said, I would advise against attempting too much at first. Concentrate your work on a few kinds until your experience will warrant you in undertaking gardening on a larger scale.

WHAT TO GROW IN THE FLOWER GARDEN

It is in the flower garden that the girls will take greatest interest, though I find that nearly all boys are fond of flowers, and are fast outgrowing the belief that used to prevail that the boy who loves and grows flowers is lacking in some of the chief elements of genuine manhood. We are coming to see that a love for all things beautiful is an element of refinement and culture, and that it is not confined to the woman or the girl. And this is as it should be.

I would advise the amateur gardener to confine her attention to a few of the best flowers. By the term "best" I refer to the "stand-bys," whose merits have made them favorites with all flower-loving people. There may be others that are more beautiful in some respects, but generally they are more difficult to grow, and fail, in the long run, to give the satisfaction that one is reasonably sure of getting from the kinds of which I shall make mention in the list below.

Do not undertake to grow "a little of everything." Some enthusiastic young gardeners that I know are inclined to do this, but they do not get



The Morning Glory is the Best of Climbing Vines

A Graceful Arrangement of Asters and Ferns

as much pleasure from their gardens as do those who limit the kinds they plant to such as they can give full justice. Here, as in the vegetable garden, quality should be considered more important than quantity.

One of the very best annuals we have is phlox Drummondi. This plant is of easy culture. It comes into bloom early in the season. It blooms with great profusion, and continues to do so until cold weather comes. No flower that we have can make a finer show of rich and delicate colors. I would advise planting the light colors by themselves, and giving the darker ones a bed of their own. The pure white varieties, the soft pinks and the pale yellows are wonderfully lovely, and will give a great deal more satisfaction when grown together than any of the other varieties.

Of course every owner of a flower garden will want to grow the sweet pea. In order to succeed with this favorite flower it must be given a treatment that no other plant adapted to garden culture requires. It likes to get a start early in the season, and it likes to have its roots so deep in the soil that they will be moist and cool in the hot weather of midsummer. Make a little trench four or five inches deep and scatter the seed thickly in the bottom of it. An inch apart is about the right distance. Cover with an inch of soil. When the young plants are two or three inches tall draw in a little more of the soil, and keep on doing this from time to time until all the soil from the trench has been returned to it. This gives the roots of the plants the coolness and moisture they insist on having. This flower can be sown as soon as the frost is out of the ground.

Calliopsis is a plant that ought to be in all gardens where something bright is wanted. Its rich yellows and browns are intense in their brilliance. It is a free and constant bloomer. It is fine for cutting, as is the sweet pea.

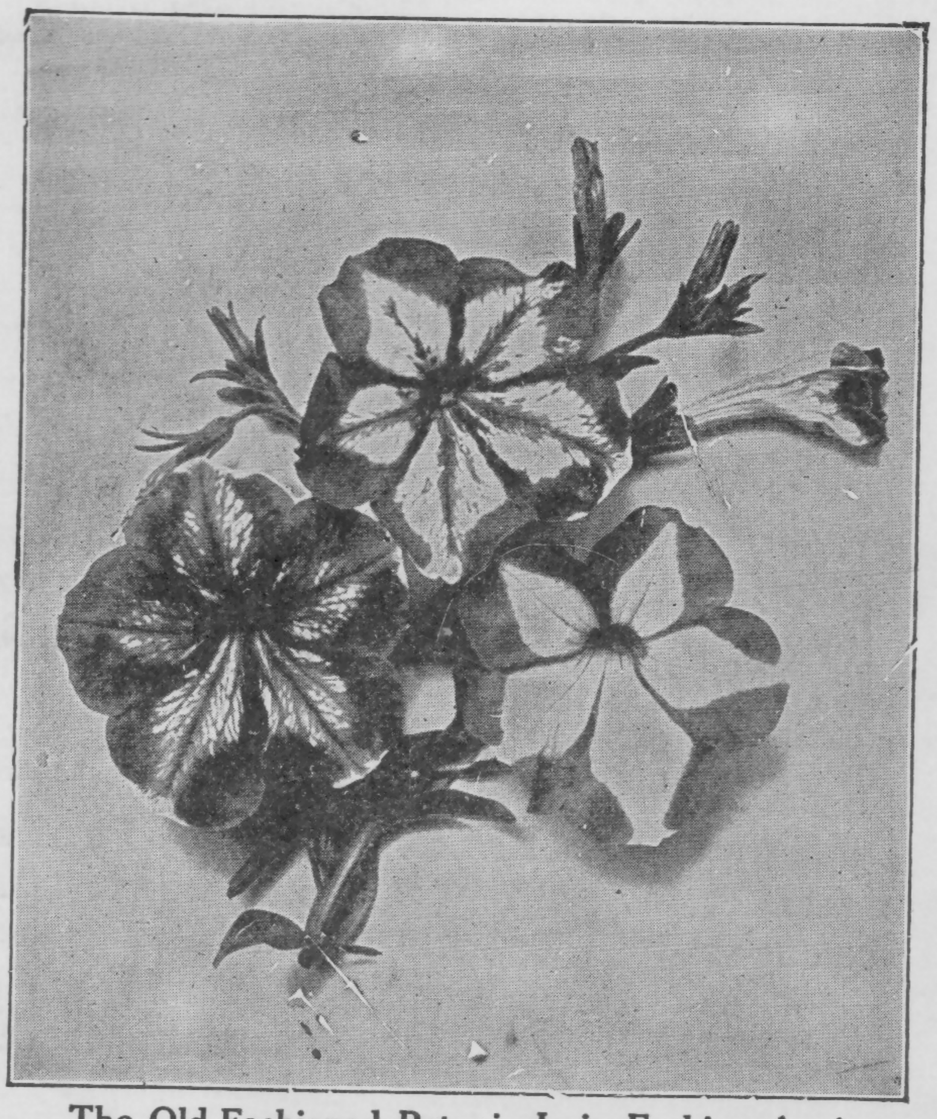
Cosmos is a general favorite, but in buying seed one must be careful to get the early-flowering kind. The old cosmos is so late in flowering that but few of its blossoms develop before frost comes and puts an end to the plant's existence. This is a fine plant from which to cut. Its lovely white and pink and rosy-crimson flowers are very charming as they dance about in the sunshine, and its fine, feathery foliage is quite as attractive as its flowers.

No collection should be without the aster. This is one of our very best annuals. It blooms with great profusion during the latter part of summer and early fall. Its pink and white and crimson and purple-blue flowers are almost as fine as roses. When cut, they last better than any other flower I know. And no plant in the long list is of easier culture.

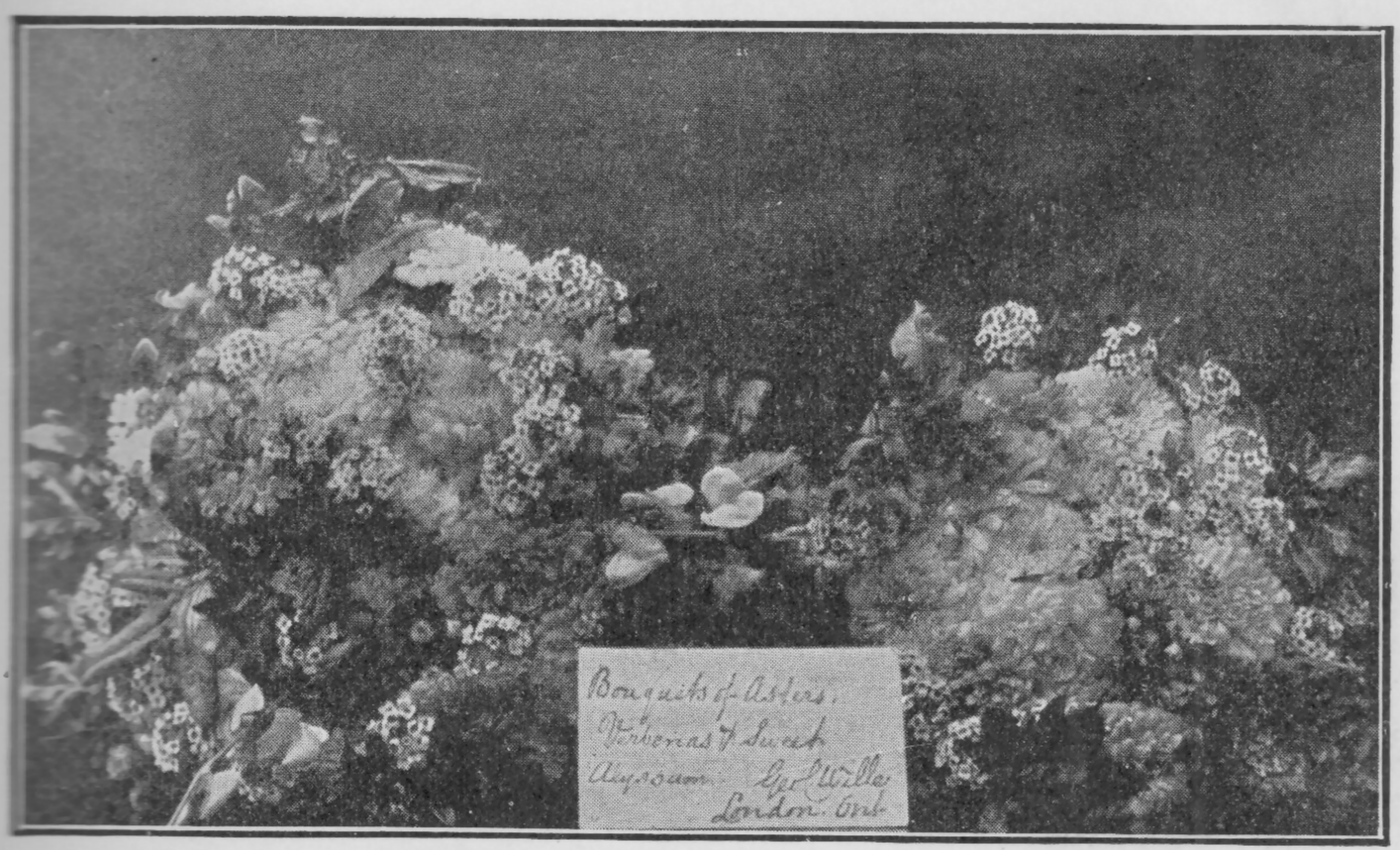
The good old verbena holds its own against all new-comers. This is a fine plant to grow near the path, or where it can be looked down upon from the windows of the living-room.

Portulacca will flourish where almost any other plant would soon die. It likes intense heat, and it stores up in its succulent foliage enough moisture to last it through a long season of drouth. Its scarlet and white and pink and yellow flowers, both double and single, are borne in wonderful profusion from July to October.

Don't overlook the balsam. This is the plant that



The Old-Fashioned Petunia Is in Fashion Again



Arrangement of Asters, Verbenas and Sweet Alyssum for Exhibit

used to bear the name of lady-slipper years ago, when our grandmothers grew it. Its slender branches will be so thickly set with blossoms that each one of them seems a bit of wreath. It is often necessary to clip off some of its leaves in order to give its flowers a chance to display their beauty effectively. This will be found most satisfactory when planted in rows.

Of course you will want nasturtiums. No garden can be considered complete that does not include them. You will find them among the best of all annuals for cutting.

I would not overlook the poppies. Have some of the large double kinds, and a bed of the Shirley strain, with its flowers of many colors, every one of which looks as if its petals had been cut from silk, such a sheen is there on them.

For a vine to clamber over the porch or about the windows there is nothing better—nor half as good—as the dear old morning-glory. Give it stout strings to cling to, or there is danger of its being broken down after heavy rain-storms or by sudden winds.

To round out an even dozen of flowers suitable for amateur culture I would like to speak a good word for the marigold. It's old, it's common, but it's all the better for that, for a flower that has merit enough to enable it to hold its own against the "novelties" that seedsmen advertise each season deserves a place in all gardens.

I haven't said a good word for the pansy, but I must do so before the list comes to an end. This is one of the flowers we cannot afford to be without. Give it a somewhat shaded place, and keep it from ripening seed, and it will bloom from early spring to August. Then cut the plants back, and let them renew themselves for autumn flowering.

SOME MISCELLANEOUS SUGGESTIONS

Begin weeding in the garden as soon as you can distinguish between vegetable and flowering plants and weeds. Don't wait until the weeds get the start of the other plants. Aim to keep them from getting a roothold. This can be done only by giving them attention daily. Root them up with the weeding-hook when they grow in the row with other plants, and cut them off with the hoe when they are in the space between the rows.

A Bouquet of California Poppies

If you want your flowering plants to continue to bloom freely and constantly throughout the season, do not allow them to ripen seed. Make a practice of going over them daily and cutting away every seed-vessel that has formed.

The Glass Flower Holder Placed in a Basket for a Pretty Effect

You will find that much more satisfactory results are secured by massing plants of a kind than by mixing them in the beds or growing them singly.

Read the catalogues carefully and make yourself familiar with the characteristics of each plant you attempt to grow. You will find that some are described as tall growers, others as of medium height, and some as dwarfs. Take advantage of this information by placing the tall growers in the rear, those of medium height in the middle, and the dwarfs near the path or in the foreground when grown with other plants.

If the season happens to be a dry one, water your plants daily. Do this after sundown, that the moisture may have a chance to settle into the soil before the sun causes it to evaporate.

Stir the soil frequently about the plants in the vegetable garden. Never allow the soil to become crusted over. If it does it can receive no benefit from slight showers and dewfalls.

QUESTIONS ON "THE CHILDREN'S GARDEN"

THE GARDEN

1. Why can gardening be said to "combine amusement and profit?" 2. What are seedlings? 3. When we sprout seeds, as corn, beans or peas, what do we see first? What next? 4. What are weeds? Can you name some garden weeds? 5. Why do gardens have to be weeded by hand? 6. How many kinds of insects can you name which injure plants in a garden? 7. Of what use are toads in a garden? 8. Do birds do more harm or good in a garden? How do you know? How could you prove it? 9. What is meant by "cultivating" a garden? 10. What things are learned in a garden? 11. Success and profit in a garden depend upon what three factors? 12. What does this chapter say about thoroughness? 13. What is meant by making the soil mellow?

CULTIVATION

14. What four kinds of plant food are most necessary in a garden? (Phosphorus, nitrogen, potash and lime.) 15. What two others are very necessary? (Water and carbon.) 16. What fertilizer contains the most of these plant foods? How is it used? 17. What is the best substitute for this fertilizer? Do different plants require the same food, or different food? How would you prove this? 18. How is manure to be spread over a garden? 19. Why is it best to spread it in the fall and let it lie on the ground all winter? 20. How soon in the spring should the garden be spaded? 21. Why leave the clods where they fall for three or four days before breaking them up? 22. What sort of soil dries quickest? Should the spading be deep or shallow? 23. How can we distinguish the very best seed? 24. If we grow our own seed, from which plants should we take it? 25. What is meant by plants being allowed to "mix?"

WHAT TO PLANT

26. What may happen to seed sown too early? 27. How shall the garden be laid out? 28. Which is better, to plant in beds or rows? 29. Should there be many or few varieties in the garden? 30. What are two kinds of beans? 31. Can you tell a good way to protect the cucumber seed from the beetles? 32. Why should your tomato plants be cut back when the fruit has set? 33. Name twelve flowering plants which may be grown in the children's garden. 34. Describe the planting and culture of sweet peas. 35. Why must weeding be done early and often? If the weeds do not form seeds, does it matter if they grow big? 36. Why must weeds be dug by the roots? 37. How may flowering plants be kept in bloom all summer? 38. How should tall and short plants be grouped? 39. What is the best time of day to water the plants? 40. What is the value of raking or cultivating the garden after a rain? 41. What happens if the soil is allowed to crust over? What is meant by a "mulch?"

Bulb Culture

Growing Bulbs without Earth

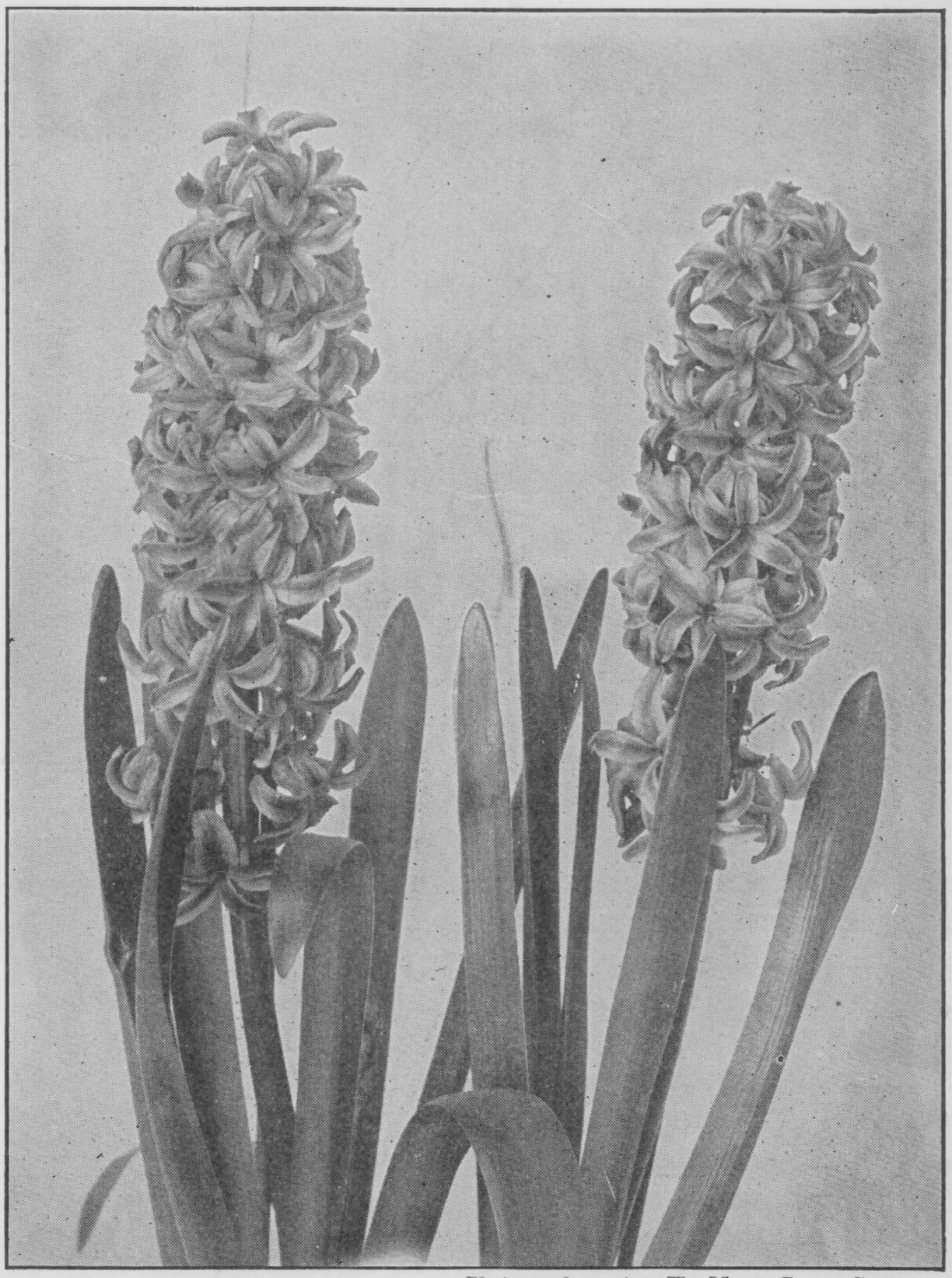
ALL CHILDREN should be interested in gardening, and in flower culture. Directions for cultivating the common forms of vegetables and flowers are given in another chapter. The climate usually limits the time when flowers may be grown to the spring and summer months. It is not easy for children to grow plants in the house in the winter. Flower pots or boxes of earth are "messy" and require frequent watering and loosening of the soil. That makes flower culture by children in winter very difficult. Yet there is a method of growing bulbs which children may attempt, a way which is neat and clean, requires less attention than soil-boxes, and which is almost certain of success.

In place of soil a prepared fiber is used. This fiber is a clean, odorless, moss-like material composed of ground cocoanut husks, ground oyster shells and charcoal, with some fertilizer mixed with it. It is very light and holds considerable moisture. It can be purchased from any reliable seed or plant house and is very inexpensive, costing about fifty cents a peck. Once used it can be stored and re-used for a number of years. It is a charming method of growing beautiful spring flowers for house and table decoration.

One great advantage is that the bulbs can be grown in any water-tight receptacle as no drainage is necessary. Very inexpensive green bowls and jardinieres can be purchased which are ideal receptacles for the bulbs. They may be placed anywhere about the house, in the drawing-room or dining-room, without fear of leakage. The bulbs can be grown in the ordinary clay flower-pots by covering the holes in the bottom with a piece of wood or a stone. Another receptacle is a wooden box about four by five by ten inches which can be painted green. One of these boxes filled with Paper White narcissuses or yellow jonquils is very effective.

Then there is the box, made of galvanized iron neatly enameled in dark green. Filled with flowering bulbs, they make a very handsome window-box and can be used over and over. Brackets come with the boxes, thus making them available for outside window-boxes in the summer.

The planting process is very simple. Select the pot or receptacle you are going to use and cover the bottom with about two inches of the fiber. Then



Photograph courtesy The Mumm-Romer Company

Grand Maitre Hyacinth

wet the fiber thoroughly and drain off any surplus water. The fiber should be moist, much like the moss you see in the woods. Now place the bulbs upon the fiber, taking care that they do not touch one other. Fill in with fiber to within an inch of the top, leaving the tops of the bulbs just exposed. Press the bulbs down and moisten again. Once potted, the bulbs must be put away in the dark until the roots are well developed.

Tulips and Narcissuses

The best place to keep the bulbs while they are making their root growth is in a cold attic. They must be covered over so as to keep out the light but not the air. The cellar is a good place, away from the furnace, where it is cold and dark. The bulbs may be put on a shelf or in packing cases partly covered over. They must not be put in any place like a closet where the air is shut out. The only attention needed now is to see that the fiber is kept moist. Do not have it too wet, as too much water spoils the bulbs.

The time for the bulbs to remain in the dark varies according to the bulbs. Some require only two weeks, some four weeks and some even longer. Below is a table that will show when to plant, when to bring to the light and when the blossoms should appear, for the different bulbs. When the bulbs have grown about an inch above the surface, they should be brought gradually to the light. They should not be placed in the direct sunlight for a week after being in the dark. They require more water after bringing into the warmth and light.

The bulbs may either be planted at the same time or at different times. The time-table will give an idea of the length of time required for root growth, and when to expect the blossoms. You cannot tell exactly, as the blossoming depends somewhat on the heat of the room where the bulbs are kept. Take the bulbs out of the direct sunlight when in flower and they will last much longer. A pot of crocus bulbs placed on the center of a dining-table will last two or three weeks.

In planting the bulbs the size of the receptacle is important. The Paper White narcissus should be potted in a receptacle as deep as an ordinary flower-pot (five or six inches). Plant four or five bulbs in a pot. The same with the Roman hyacinth and jonquils. All these being large bulbs, they require plenty of room for their root growth. The crocus, being a small bulb, can be planted in a pan two or three inches deep. Plant six or more in one pan. Plant the Dutch hyacinth singly in a five-inch pot. These bulbs come in several colors.

It is a good plan to buy only the best bulbs. They cost a little more but they ensure success. It is a good idea to keep a record of the bulbs you plant. The time of the potting to the time of the bloom should be kept carefully, also the number of days each kind of bulb continues its bloom. This will help for another year.

The following is an ideal selection of bulbs to grow successfully in the fiber, and the time-table.

	Planted	*Brought to the light*	*Bloom*
Paper White Narcissus	Oct. 15	Nov. 1	Thanksgiving
Roman Hyacinth (White)	Oct. 15	Dec. 1	Christmas
Jonquils, Von Sion (D'ble)	Oct. 15	Jan. 1	Feb. 1
Jonquils, Golden Spun (S.)	Oct. 15	Jan. 1	Feb. 1
Crocus (Large Bulbs)	Oct. 15	Jan. 15	Feb. 15
Dutch Hyacinth	Oct. 15	Feb. 1	Mch. 1

There are many other kinds of bulbs that may be grown in this way but the varieties spoken of are the easiest for the child to grow.

Indoor Gardens

Box Gardens as a Winter Pastime

CHILDREN always love a garden and there is no more wholesome and healthful exercise in which they can indulge than the making of one. In the cold months of winter the child longs for the buds and blossoms of summer and also he has more leisure in which to cultivate an intimacy with plants, as well as the energy necessary to take care of them, which may be lacking somewhat when warmer days come.

Giving the Boxes of Seedlings an Airing

The first of February is a good time to start a window garden. Cabbages, tomatoes, peppers, cauliflowers, cosmos, asters, pansies and verbenas should be planted at this time. They are all easy to raise with ordinary care. One flower and one vegetable will be enough for the beginner. If there is more than one child in the family, each one may raise different things so as to have a greater variety. Early Jersey Wakefield cabbage, Ponderosa tomato, Ruby King pepper, Dry Weather cauliflower, Early Dwarf cosmos, Giant Branching asters, Giant pansies and Giant verbenas are very satisfactory kinds. Several of the largest seed houses in the United States put up two-cent packets of seeds especially for children, and some firms sell one-cent packets. They also send out very helpful literature with their seeds, so that even if the mother knows nothing about gardening she may easily acquire the necessary knowledge.

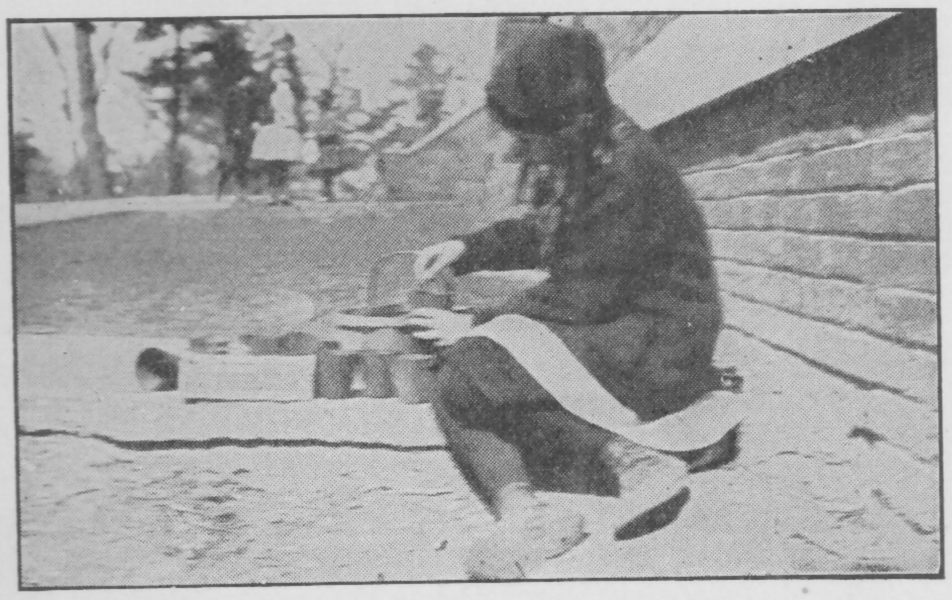
Having secured the seeds, the next thing is to get a suitable box. A small yeast box or a cigar box is ideal for this purpose, and it may be obtained from the grocer. The child will enjoy going after it himself. Now fill it with nice garden soil. If the ground is covered with snow a little space can be easily cleared and a few frozen chunks chopped out, or an opportune thaw may occur. When the soil is brought into the house it must be allowed to dry out thoroughly without handling, for it will become sticky and hard if used while wet. It should be made very fine before filling the box. Take a little board and press down firmly all over the surface to make the soil compact. Divide the box into halves, and mark the rows for the seeds with a ruler and lead pencil. The rows should be an inch apart and the seeds dropped in a quarter of an inch apart. Put the flowers in one half and the vegetables in the other, and sprinkle over them carefully just enough soil to cover them. Again press the soil with the board, for the seed babies want to be tucked in tightly.

Now the boxes must be watered. No matter how carefully the water is poured, or spilled on, the seeds will be washed out. But if a piece of cheesecloth is stretched over the top of the box and the water poured on this, not a particle of soil will be disturbed. Another good way is to dip a whisk

Large Enough to Transplant to Pots

broom a little way into water and shake it very gently over the box, repeating the operation until the soil is wet enough. The watering should be done in this way until the seeds are well over ground. Care must be taken at all times not to give too much water or the soil will become soggy, sour and moldy, and the seedling will die. It is just as bad not to give enough water, for then the plants will dry out and die, or become sickly. Cigar boxes have a very good habit, though, of always splitting apart at the corners, thus affording good drainage.

The three essentials for plant growth are soil, moisture and sunshine. Having already provided



Transplanting into Pots

the first two, nothing now remains but to place the boxes in a warm sunny window where they will not be chilled at night and where the window may be opened in the daytime to provide fresh air. A pan of water set on the stove or radiator and allowed to evaporate will add very much to the health and well-being not only of the plants, but also of the people in the house. If the plants begin to look weak and pale they are either being kept too warm or are not getting enough fresh air. The remedy is obvious.

The child will get the greatest delight from watching his box, especially when the first pale green sprout begins to show above the ground. It will very likely prove to be a weed, but no matter, the child will find it out for himself when the well-ordered rows appear, and will enjoy pulling the intruder up by the roots. If he watches the boxes closely he will make a wonderful discovery, for the second pair of leaves will not be the least bit like the first! Don't tell him beforehand, but let him make his own discoveries. In case the plants come up too thickly, some of them must be pulled out or they will not make a strong growth. In doing this sacrifice weak, backward seedlings.

As the season advances and the weather becomes milder, the plants must be gradually "hardened off." Any day when the temperature is about fifty degrees they may be set outdoors in full sunshine, in some sheltered spot where the wind does not blow. From eleven until two o'clock will be long enough at first, gradually lengthening the time as the plants grow hardier.

When the third pair of leaves begins to appear it is time to transplant. Little two and one-half or three inch paper flower-pots may be bought for ten cents a dozen at any seed store, or they may be ordered from the seed catalogues, but they cost more if sent by mail. A knife or old teaspoon is good to use in transplanting. Begin at one corner and take the plants in order as they come. Put one or two (if two, a little distance apart) in the flower pot which has been half-filled previously with soil. Then nearly fill the pot with earth, leaving a little space at the top for watering. The plants will have to be kept in the shade for a few days, as transplanting disturbs the roots, and the hot sun will wilt them down. But as soon as they are over the change, the more sun they get the better. When the weather gets mild take them out to the south side of the house, put them as close to the wall as possible and slant an old window over them. Cover at night with a blanket, and keep the angles at the ends tightly closed with boards and blankets, and the child has a little greenhouse that will trap enough sunshine through the day to keep itself warm at night. As it grows warmer, the window may be removed and replaced only when there is a dangerous drop in temperature. By the time the plants have outgrown the little flower-pots it will be time to set them out in their permanent quarters in the garden. There the sturdy rows of plants will be a constant source of joy to the child.

If there is a very tiny tot in the family, he will beg to make a garden too, and he should not be denied. Let him have an eggshell garden, and he will be happy. He can save eggshells until he has a dozen. They must be broken only near the top, for they are to be little flower-pots and we want them as large as possible. Make a little hole in the bottom of each shell with a nail, for the water to drain through. Fill a pie-tin or any other shallow pan with sand and set the shells in this so that they will stand upright. Fill the shells with soil, put a large seed in the middle of each, and cover with earth. Press the soil gently with the thumb, and water with a teaspoon. Sweet-peas, nasturtiums, four o'clocks or any good sized seed is suitable for this. They will grow nicely, and when they become too big for the shell, the little one will not have to transplant them—a thing which he could not do—but the shell can be gently crushed and the whole thing put into the flower-pot without disturbing it. As the roots grow they will come through the broken places in the shell and force it apart. When it is time to set the plants out in the garden the bottom may be torn out of the paper pot, the joining in the side loosened and the pot set right into the hole prepared for it. So the tiny gardener can accomplish both transplantings himself without danger to his plants, and in this way he can have a garden just as well as big brother or sister. —*E. L. White.*

Spring Blossoms in Winter

Forcing Shrubs or Trees to Bloom

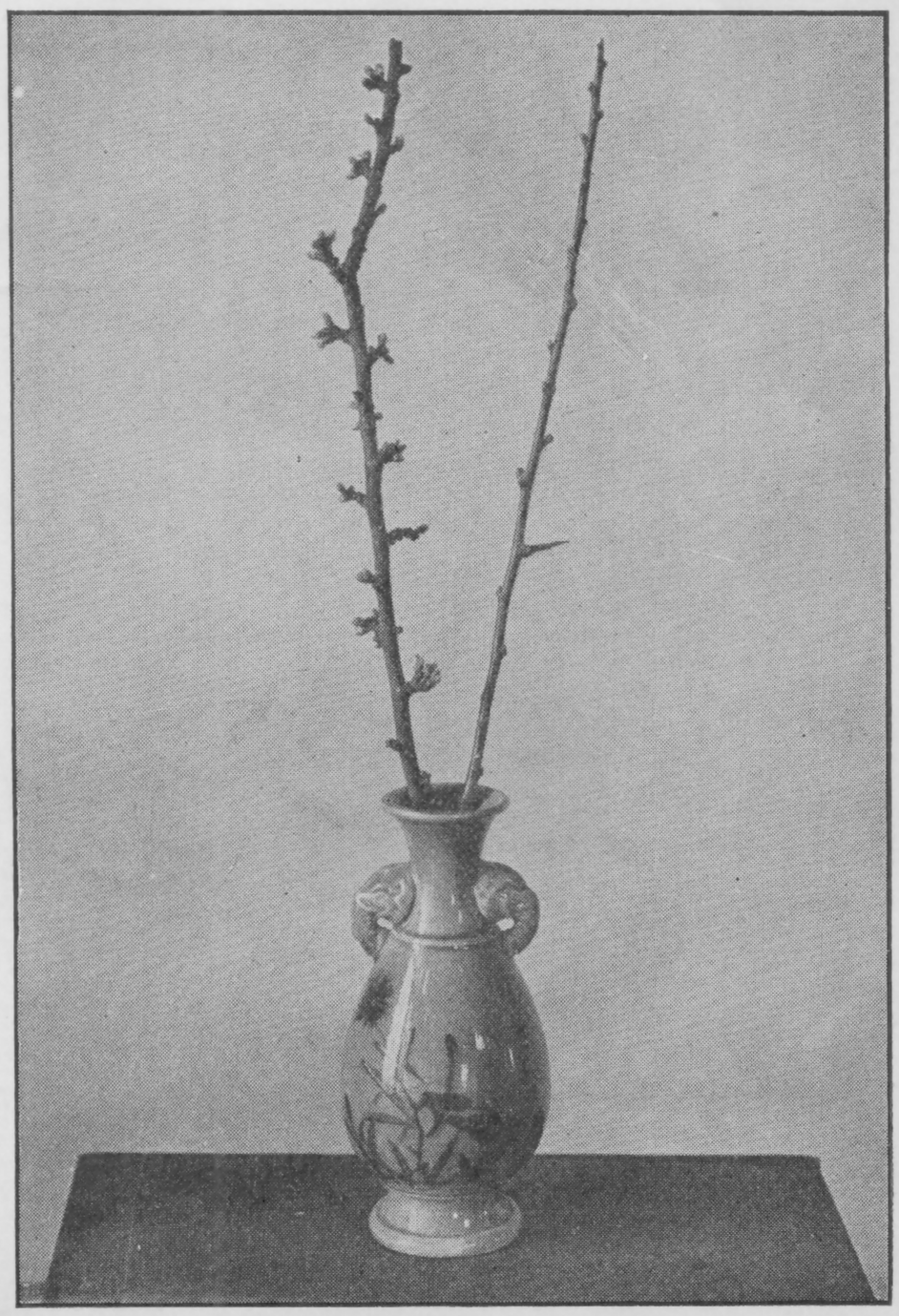
FLOWERS are always scarce in the early months of the year. Here is a very simple plan by means of which it is possible to secure a wealth of spring-like bloom. Most people

Sprays of Wild Cherry

know that the branches of the various trees and shrubs contain the buds of leaves and flowers even in the winter. These are just waiting for the coming of the spring in order that they may expand. Now it is possible, in any warm sunny room, to make these boughs display their loveliness two or three months before their proper time. In this way we shall indeed have a wonderful show of spring flowers right in the middle of winter.

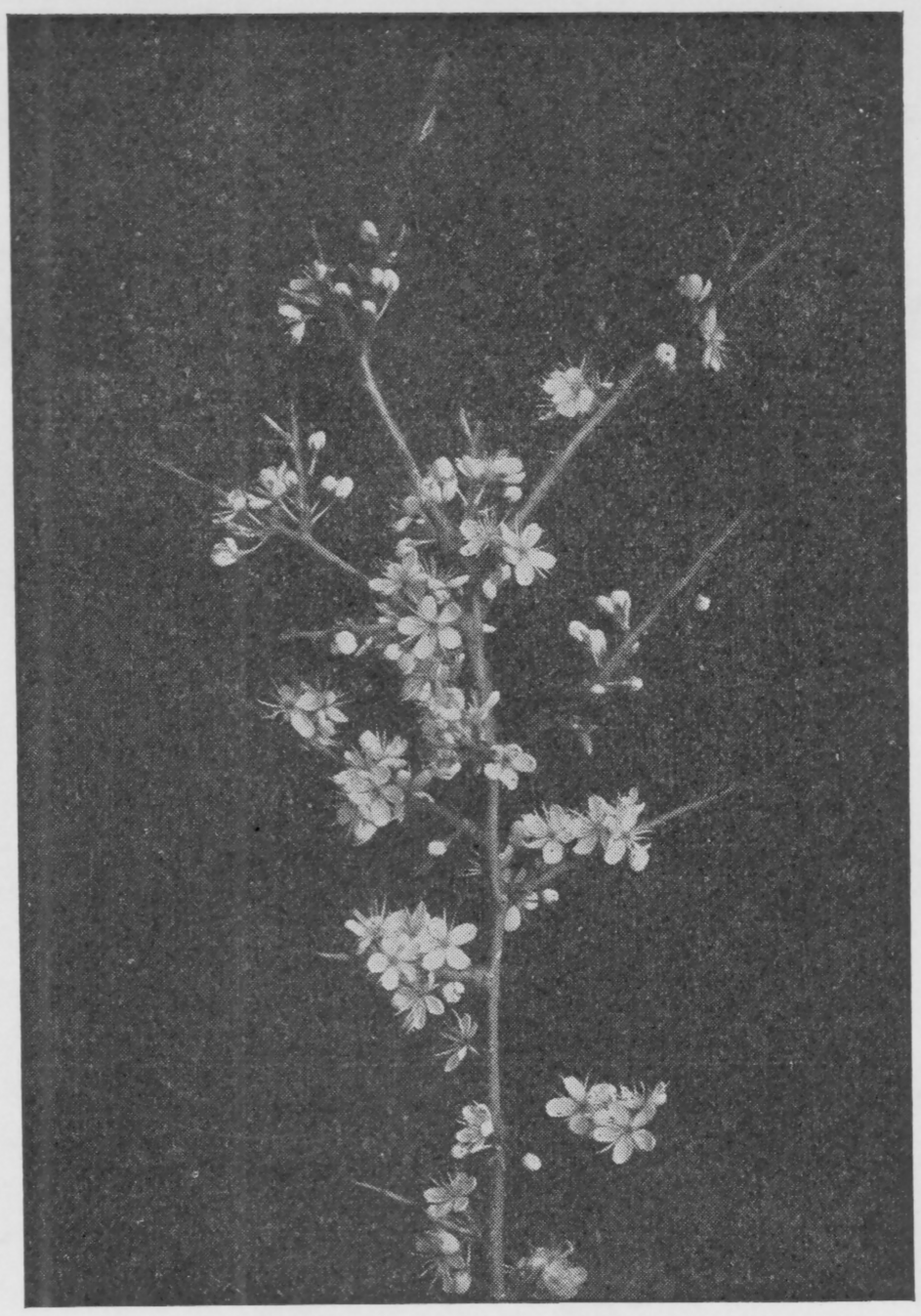
Any of the spring blooming trees or shrubs would do well; among those which always give the best results are plum (either wild or ornamental), cherry, the Japanese quince of the gardens, and the flowering currant. Many other shrubs or trees will display their foliage under this treatment, and it is always worth while trying fresh subjects. In the case of flowering bushes, it is well to get branches with plenty of blossom buds on. It is not difficult to distinguish those buds that will produce the flowers, as they are fatter and more blunt at the tips than the leaf buds. Anyone who has a fruit garden will show you in a few moments which are the bloom buds in such a way that you will not forget it. As a rule, these are borne on much shorter twigs than the foliage buds.

Any time after the coming of the new year we



A Flowering Branch and a Leaf Branch

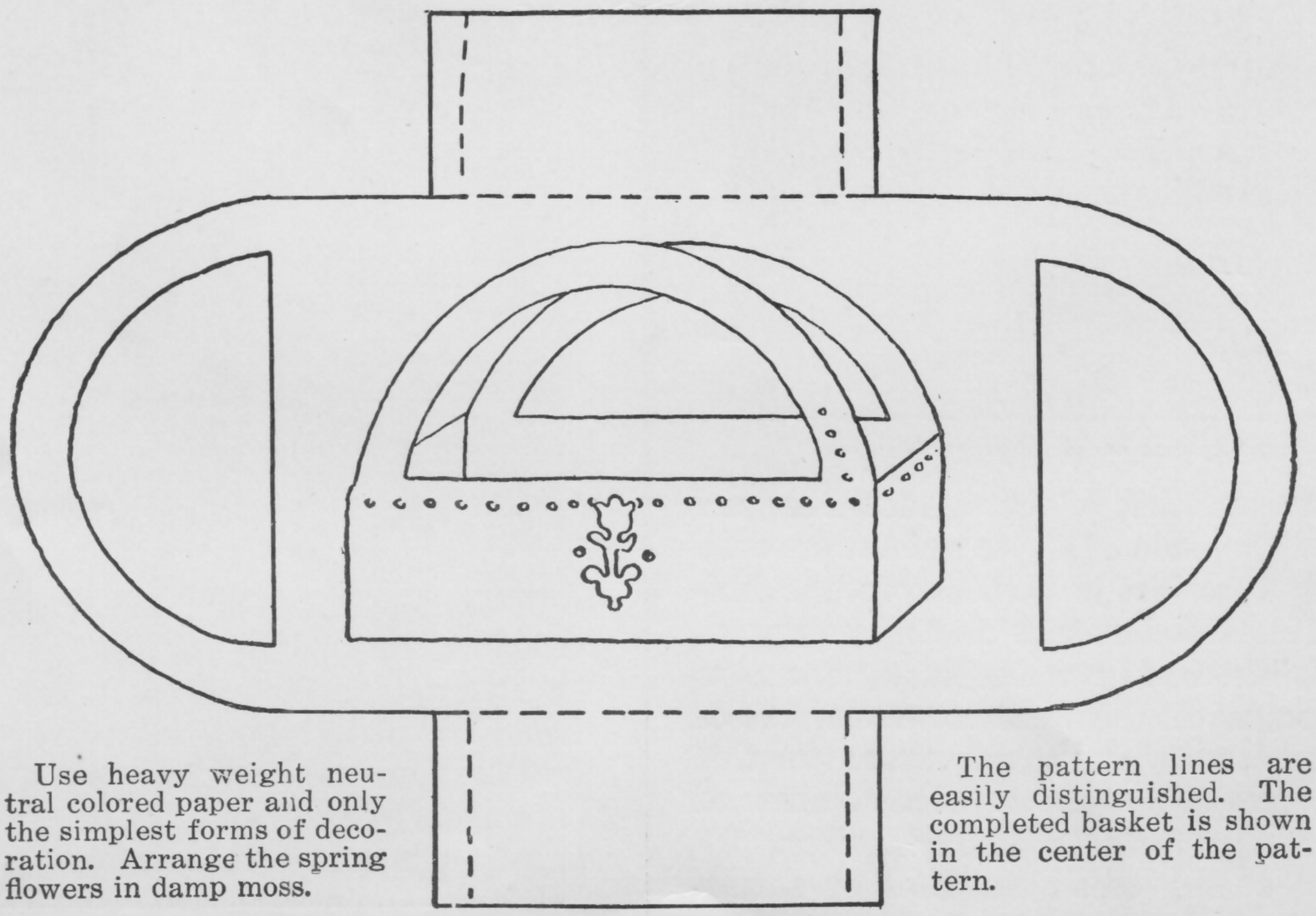
may cut the boughs. Try to get some branches that have a nice artistic growth, as these will look much prettier than the ones which have developed in an ungainly fashion. The first step in the treatment is to peel away the bark from the lower part of the bough. This should be done to the height of three or four inches, so that when the branch is placed in water it will be able to absorb the moisture very freely. Now take some jars and fill them with fresh water, putting the branches into them. It is a good plan to put the boughs in a dark shady corner for about three days. The later development is better where the branches have a short resting spell away from the light.



Spray of Wild Plum

At the end of three days the jars should be brought out into a place in a sunny window. If the apartment is well warmed, the subsequent stages of development will be all the more rapid. Every few days it is a good plan to change the water in the jars, although it will not be needful if one or two lumps of charcoal are placed in the liquid. This will have the effect of keeping the water sweet and clean.

The stages in the expanding of the buds are of wonderful interest. The first sign that something is happening is a distinct increase in size. Then it will be noticed that the tightly closed case is "giving" just a little. Finally the cracks increase so much that the green of the leaves and buds can be discerned. Then comes a day, usually about three weeks after the starting of the novel growth, when the fat buds emerge. From thenceforward it is not long before the branches are transformed into a wealth of spring loveliness. The rate of growth is largely dependent upon the warmth of the room in which the branches are placed, but sooner or later the desired result is secured. It is not a bad idea to sprinkle the branches with a little warm water now and again, so as to wash away any dust accumulation. Those who have not tried this plan will be astonished at the ease with which these spring blossoms are produced, and the plan is certainly one to carry out each season.
—*S. Leonard Bastin.*



Use heavy weight neutral colored paper and only the simplest forms of decoration. Arrange the spring flowers in damp moss.

The pattern lines are easily distinguished. The completed basket is shown in the center of the pattern.

Pattern of a May Basket

The World We Live In

By EDWARD A. PARKER, Formerly Supervising Agent of the Connecticut State Board of Education, and Superintendent of Schools, Berlin, Conn.

Some of Nature's Works and Ways

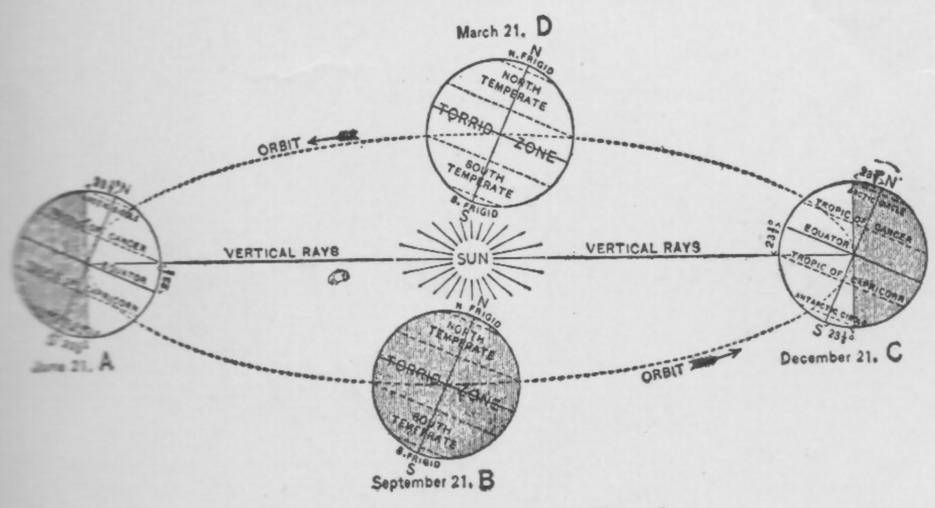
If we can only come back to Nature every year and consider the flowers, and the birds, and confess our faults and mistakes and our unbeliefs under the silent stars and hear the river murmuring our absolution, we shall die young, even tho' we live long, and shall carry with us into the unseen something which will make it worth while to be immortal.—*"The Sign of the Balsam Bough"—Henry Van Dyke.*

TO THE child of six or seven years, whether in school or not, the world is a vast puzzle, and the source of innumerable questions; some simple, some hard, some beyond his ken, and some beyond ours. This chapter suggests some of the things which may be taught to the child, in the attempt to satisfy that insistent curiosity which is the mark of an eager and expanding mind.

LIGHT

Light comes from the sun. The sun is an immense ball of fire, millions of miles away, and the earth revolves around it, steadily, regularly. This light travels through space from the sun to the earth, with marvelous rapidity, 186,000 miles per second. At that, it takes a ray of light eight and one half minutes to travel from the sun to the earth.

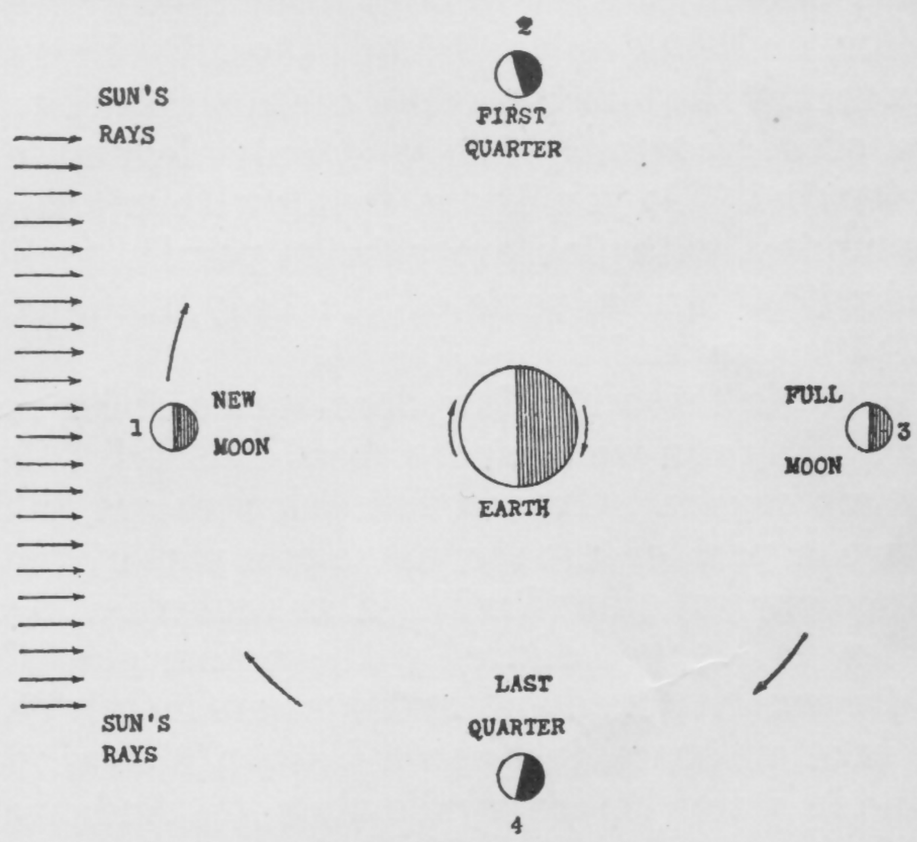
How far is it? and how fast is that? Well, if one of our express trains should start from the earth today, bound for the sun, and should travel a mile a minute, without stopping day or night, it would take 180 years to complete the journey.



Relation of Sun and Earth

This diagram shows the revolution of the earth around the sun. When the earth is farthest from the sun, it is 94,500,000 miles away. When nearest, it is 91,300,000 miles away. The variation is 3,200,000 miles, or a little more than 3% of the mean distance. Summer comes when the earth is farthest from the sun, because the sun's rays are direct; and winter when it is near, because then the sun's rays are slanting. In the diagram the difference between least and greatest distance is exaggerated.

It is proper to think and talk about light first of all, because without light there would be nothing else on earth to talk about. Plants cannot live without light. We know that from observation. Watch the potatoes sprout in the cellar and try to grow, and they are slim, spindling, leafless, yellow things; stunted for want of light. Why is that? Because the green substance in leaves, called *chlorophyll,* takes the plant food secured by the plant roots, and, by means of sunlight, digests it

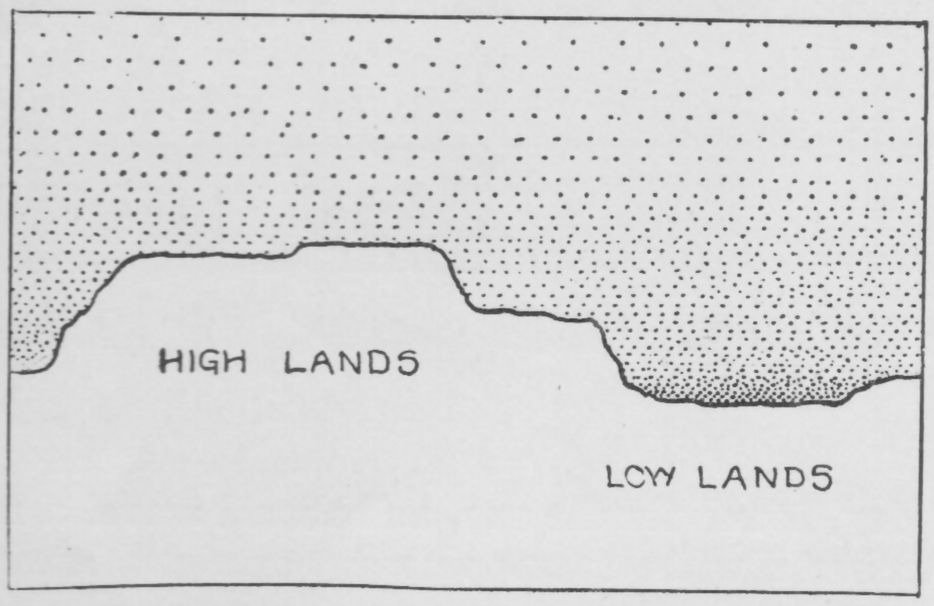


The Earth and Moon

The moon revolves about the earth in twenty-eight days. The relation between the sun's light and the light of the moon is here shown, also the reason for the so-called "phases of the moon."

so that it feeds the plant and makes it grow. In darkness the plants are fed. The accumulated food, prepared in the sunlight, is then distributed to all parts of the plant. Clearly, without the sunlight to digest the food, the plant will starve. But all animals live on plants, or on other animals who *do* live on plants. That is true of man. Therefore if the sun never shone we would soon have no plants, then no animals, and lastly, no men.

However, this is not the only reason why we need the light of the sun. We need it to make us happy. Watch the plants and flowers, and see them respond to the influence of the sunshine. The birds and all animals show by their actions that they feel better and more cheerful when the day is sunny.



The Sea of Air Is Denser at the Bottom than at the Top

But the sunlight is necessary for health. If houses are tightly shuttered and dark, gloomy and damp, sickness is very apt to result. The best cleanser, next to water, is sunlight.

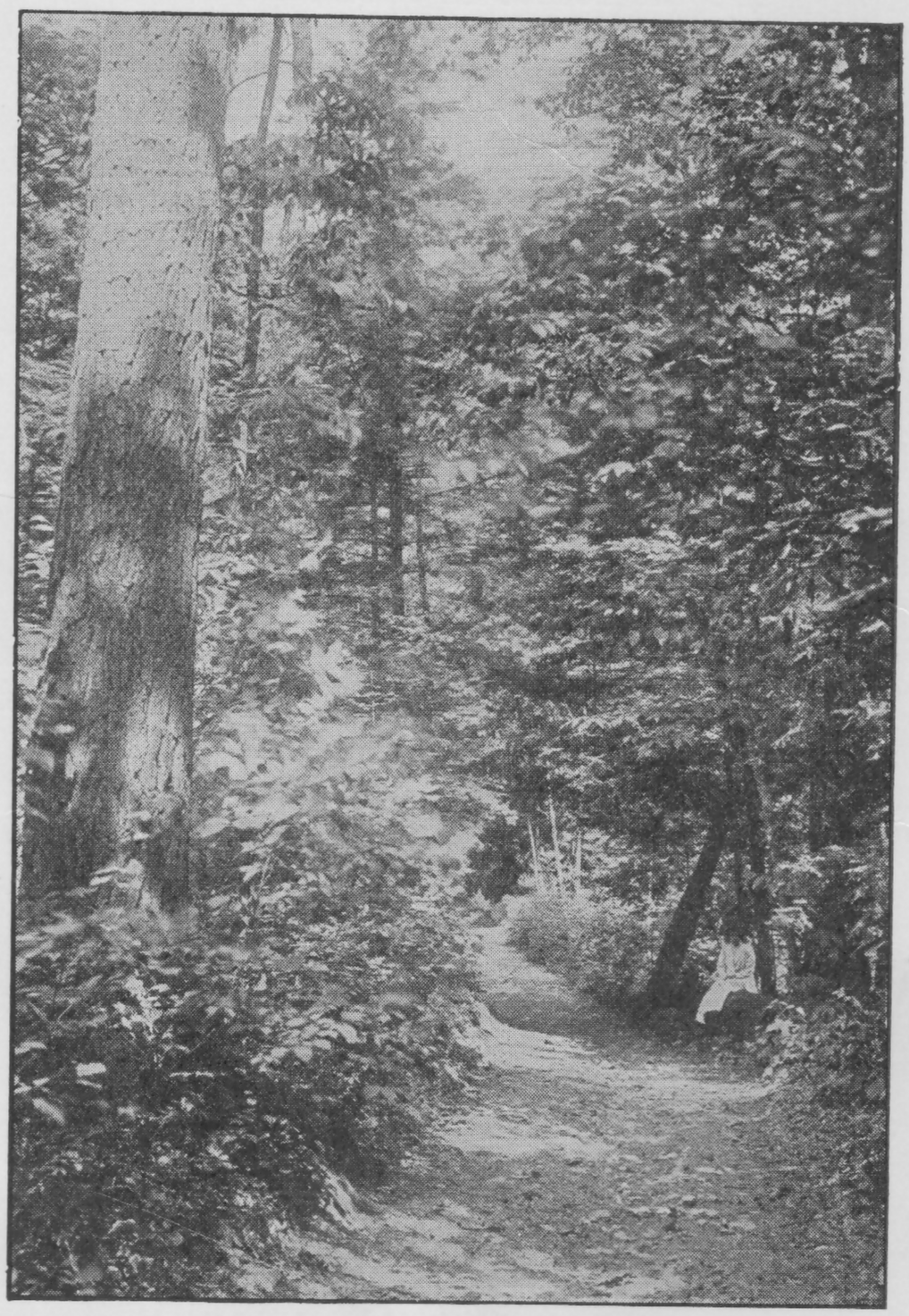
AIR

We live at the bottom of a sea, forty or fifty miles deep. We move along the bottom, perfectly unconscious of the fact, but still it is true. "But," some one says, "we thought the seas were of water, and that only fish lived there." Yes, that is a fact. The *water* sea does contain fish; but the sea of *air* contains men, and animals, and birds *swimming*. Do you know, flying with wings and swimming with fins are exactly parallel motions and with the same parts of the body, modified to suit the element?

What *is* the air? How does water differ from air? Why can we compare them so closely? Both contain *oxygen*. Oxygen is a colorless gas, which forms a part of the air, and also a part of water. Air is oxygen diluted with a gas called *nitrogen;* water is oxygen diluted with another gas called *hydrogen*. Nitrogen and hydrogen are merely gases to take up space, just as we dilute a strong medicine in water before swallowing it. And again, "What for?" Because the oxygen is too strong to be taken pure. It supports life. It purifies the blood. It is *the* thing which we must have in the air that we breathe. It is the thing that makes fire burn; and a smouldering ember, dropped into a tank of pure oxygen, will burst into flame of its own accord. If we were to breathe oxygen undiluted, it would drive us crazy, and we would die, the tissues of the body burned up, or consumed, by the fierce action of this life-giving gas. So it is diluted.

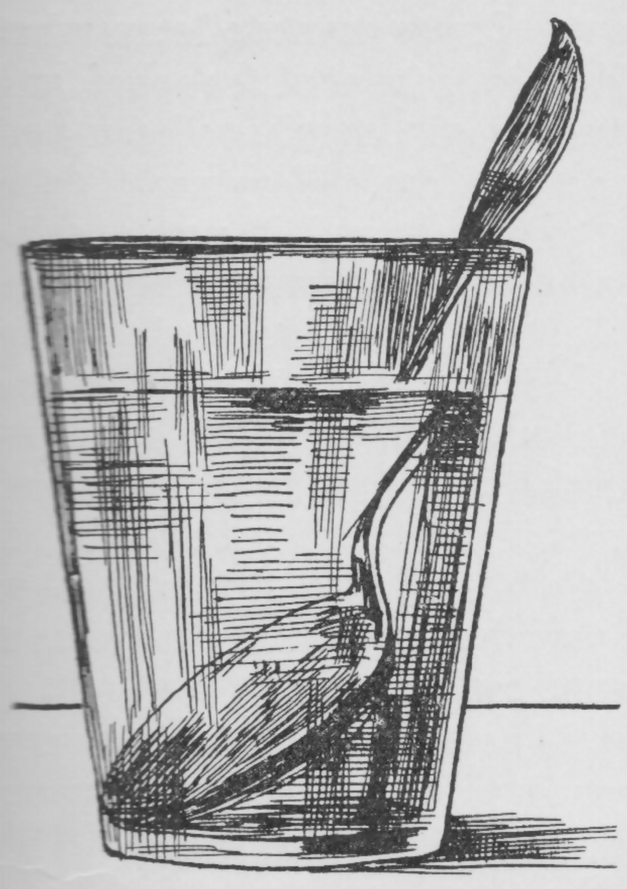
Now, the air is a thin mixture, with nitrogen, which will go into lungs without hurting them. Water is a dense or heavy compound. For, wonderful to relate, water is the compound of two kinds of gas, both invisible. If a jar of gas, one part oxygen and two parts hydrogen, is mixed, and then through wires, an electric spark made to flash within that jar, there will be an explosion, and real water will be found among the broken pieces of the jar. So we conclude that water contains oxygen; that water is a medium denser than air, which supports the bodies of the fish while supplying the oxygen which their gills extract in breathing.

There is another wonderful fact that is true of the air, another thing which shows the marvelous way in which all of the elements of Nature depend on each other, and aid each other. When we breathe in oxygen, we breathe out a gas called *carbonic acid gas*, or carbon dioxid, which, in sufficient quantities, will suffocate animals or men. Think now of the millions of people constantly breathing out poison into the air, year after year. Why do we not all die? What becomes of it? Ah, there is the beautiful preparedness of nature. The plants breathe it in. Oh yes, plants breathe. They are alive, and all living things breathe, and eat, and sleep, and reproduce themselves after their kind and manner. So we must not be surprised to



"Our Friends, the Trees"

Forest vegetation. The leaves purify the atmosphere, the lumber is valuable, the dead leaves and branches hold the rain like a sponge, and the roots keep the surface soil from being washed away, or dried up. Standing forests prevent disastrous floods.

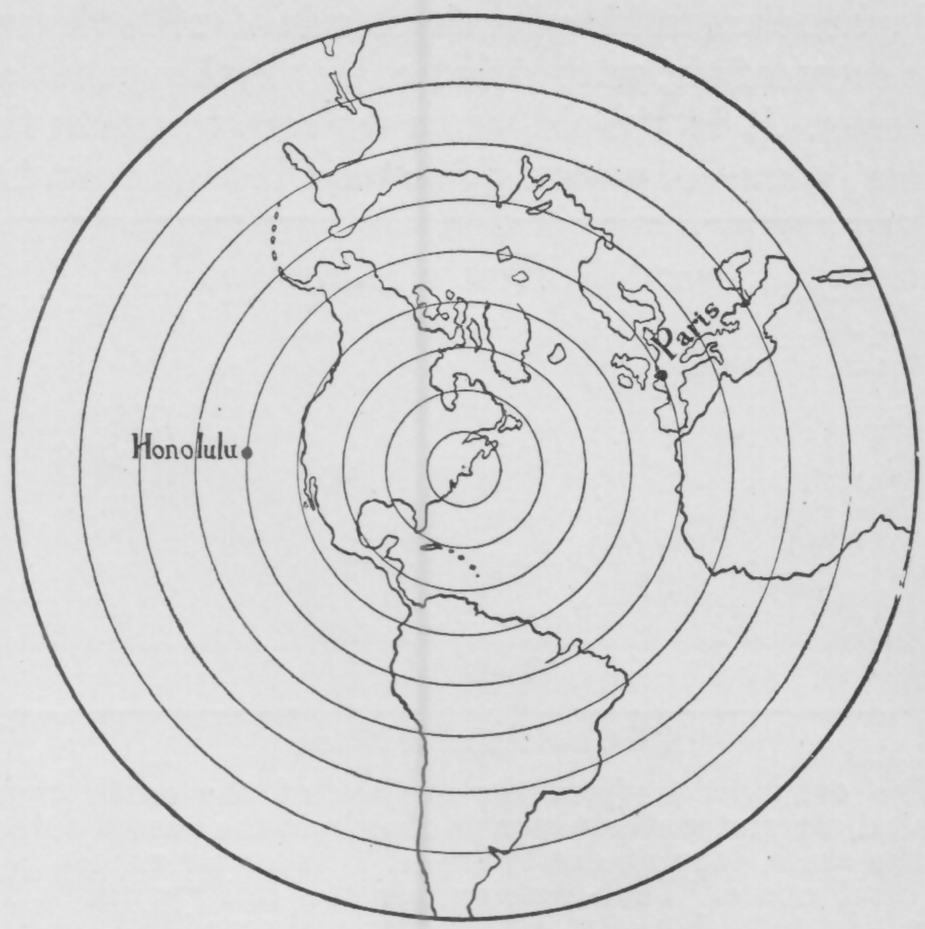


learn that plants breathe. They breathe *in* the carbonic acid gas which is poison to us, and they breathe *out*—what? What do you think? Why oxygen, the life-giving oxygen! So, plants are our dearest friends and should always be our neighbors, should they not? Plants are good in a room. Trees, shrubs, and lawns of rich grass are healthful.

There are other things that the air does. It conducts heat, light and sound. How can we see through this invisible sea that is over and around us, in which we are submerged? Why, because air permits light waves to pass straight through, without deflecting, or breaking, or twisting them. What do I mean by deflecting? Place a spoon in a glass half full of water, and then look at it. Where air and water meet the spoon seems bent. That is deflection. Now, if the air did that, think how it would be! We could see nothing straight, nor in its true position. Distant objects would appear distorted, and might seem higher or lower than they really were. We could not walk or run, for fear of running into objects that were not where they seemed to be.

A.

Circles of Ever-Widening Ripples Caused by the Throwing of a Stone



B.

Air Ripples Explanatory of the Principles of Wireless Telephone or Telegraph

And how does air conduct sound? To the people of today that is an especially interesting question, because the wireless telegraph and the wireless

QUESTIONS ON LIGHT AND AIR

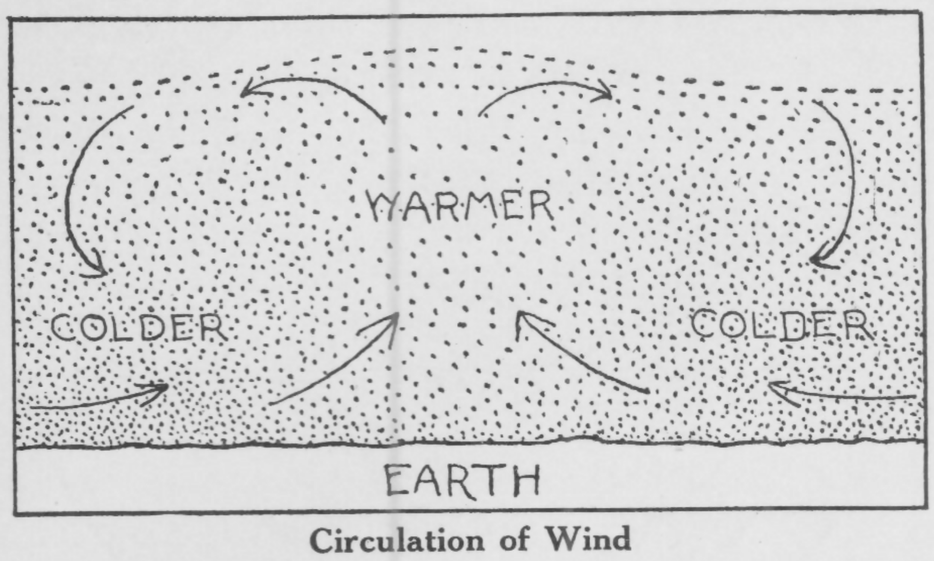
LIGHT

1. *What is the sun? How can it give light?*
2. *What is meant by "revolves?"*
3. *How fast does light travel?*
4. *How long has the sun actually risen before we see it?*
5. *Of what use is light to plants?*
6. *What is chlorophyll? What does it do?*
7. *How many ways can you name in which light is necessary to us?*
8. *What would happen if the sun never shone?*

AIR

1. *Why do we speak of a "sea" of air?*
2. *Try to compare the ocean and the sea of air in as many ways as you can.*
3. *What is oxygen? How is oxygen combined to make air? To make water?*
4. *The air is a "mixture" and water is a "compound." What is the difference?*
5. *What is meant by "combustion?" Describe the way in which oxygen supports flame.*
6. *How does oxygen support life?*
7. *Why is it diluted, both in air and water?*
8. *What is carbonic acid gas? How is it dangerous to human life?*
9. *What becomes of the carbonic acid gas, or carbon dioxid, that men and animals breathe into the air?*
10. *How is the supply of oxygen in the air renewed?*
11. *How can we see through the air?*
12. *What is meant by "deflection?" Give an example. Does the air do this?*
13. *Illustrate the way in which the air conducts sound. Does water conduct sound well?*
14. *How is the wireless telegraph possible; can you guess?*
15. *Why can wireless messages be picked up at many places at the same time?*

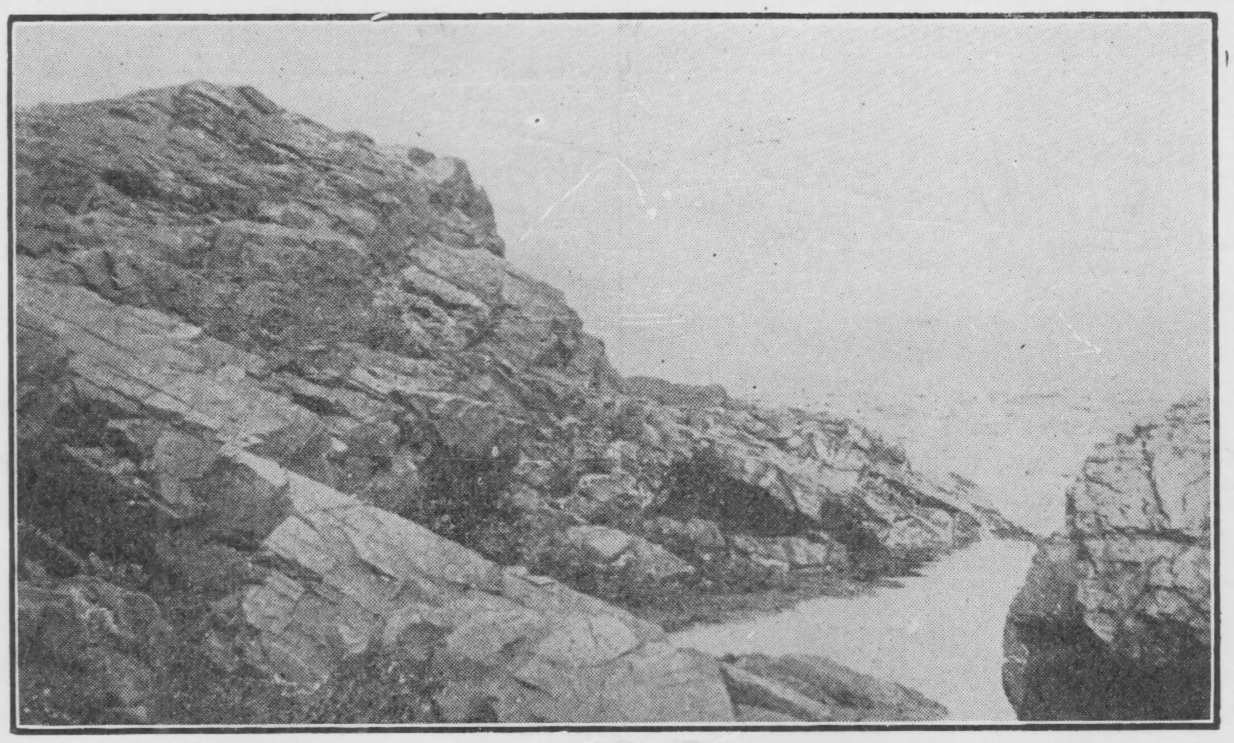
telephone are talking for thousands of miles through the ocean of air, without wires or anything that can be seen. It is simple, when we compare with that other ocean—of water. If a stone were thrown into



Circulation of Wind

The evaporation from the surface of the earth causes heated air and water vapor to rise from the heated surface of the earth, leaving empty space. Cooler air rushes in to fill that space. That rushing air we call "wind." The direction and force of winds are variously modified.

a quiet pool, and you did not see it, could you tell immediately afterwards that it had been thrown, and where it had landed? Of course, by the ripples, in ever-widening circles. Well, the air does exactly the same way. When a "noise" is made, that means that vibrations are set up in the air, which travel on and on in all directions until they are heard, or until they die away as the ripples do. For example, when the first wireless telephone message from Arlington, Va., was sent to Paris—it was caught also at Honolulu. How? On the other side of the circumference of the air ripple. Paris and Honolulu are about the same distance from Arlington, in opposite directions, and the air wave that reached the city in Europe, with its message of electrical disturbance, was the very same air wave that brought, at the same time, the same message to the island in the Pacific.



Surf-Beaten Rocks

There was a time when the whole earth had this aspect.

CLOUDS

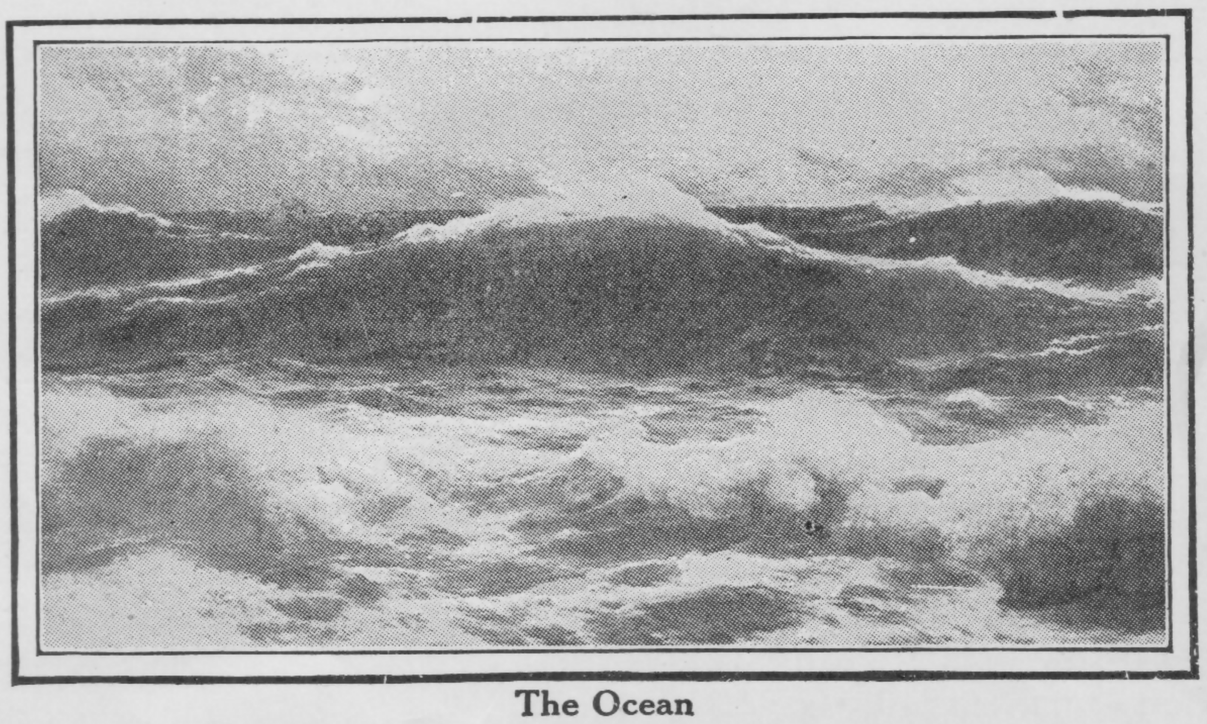
If a small dish or pool of water is allowed to stand in the sun, it very soon dries up. We say that it has "evaporated." That means, by the form of the word itself, that the water has become *vapor*, or gas. The heat of the sun has changed the water from a liquid into a gas, which, being warm, will rise in the air and mingle with the warm atmosphere as an invisible water vapor.

Again, when the teakettle boils, steam comes from the spout. If you want to learn what steam is, hold a cold plate in front of the spout, and see the drops of water collect. They have been condensed, we say, from the steam. Very near to the spout the steam is colorless, and if you are incautious enough to place your finger in that place you will find that it is very hot. Every housewife knows what it is to be scalded with steam from the cooking, or from the wash-boiler. Yet, at a distance of a few inches, the steam has become visible, and the hand, or even the face, may be placed in it without danger. So we deduce that steam—a water vapor that is very hot—becomes visible as a white steam-cloud as it cools.

Further, if a house is heated by steam, it is very necessary to have return pipes from the radiators, to return the condensed water to the boiler. The steam goes through the pipes, condenses, the drops run back to the boiler, are heated, and then start back again.

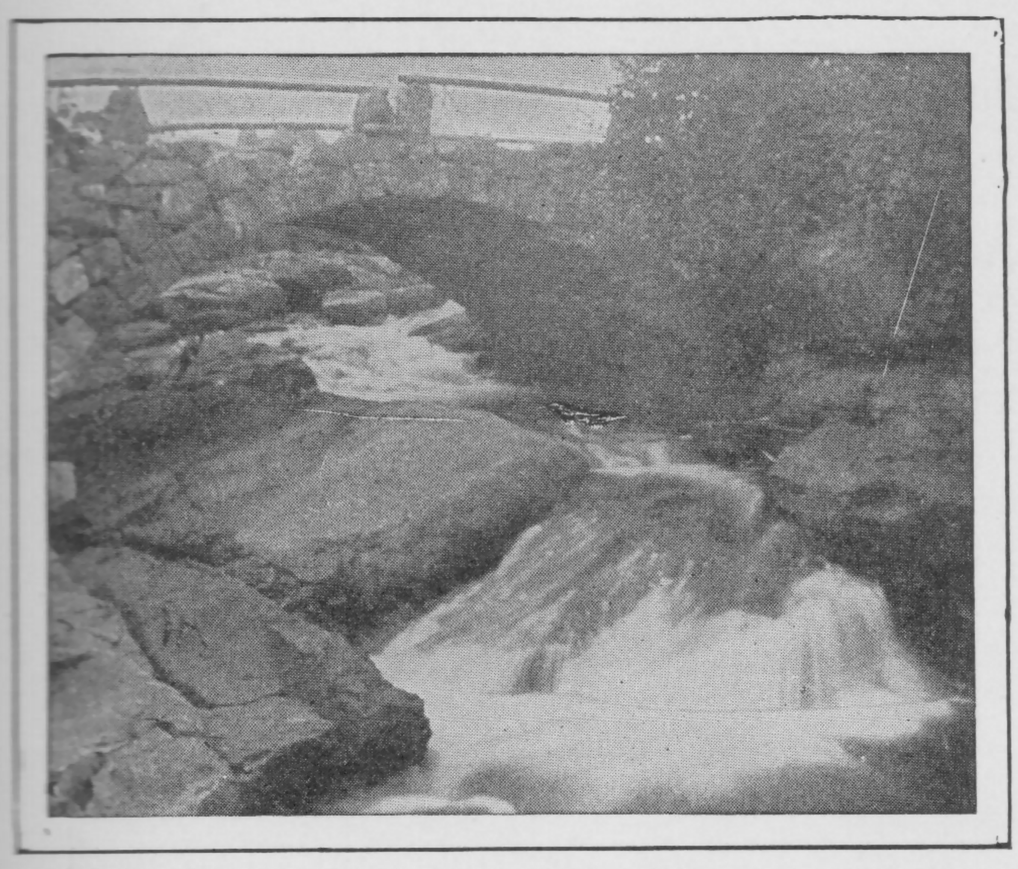
But, what has all this to do with clouds? What have teakettles, and cold plates, and steam pipes got to do with clouds? A great deal, indeed. They are the exact processes which go to the making of clouds.

All over the world, from the surface of river and lake and ocean, the sun is constantly evaporating water. This vapor floats in the air invisible until it meets with colder air currents, when, like the cooling steam from the teakettle, it becomes visible as a white cloud. Steam condenses on a cold plate, to form water drops. The cloud condenses in the face of a cold wind, to form raindrops. As the water drops in the steam pipes flow



The Ocean

Most of the water of the clouds comes frcm the surface of the ocean.



Mountain Stream

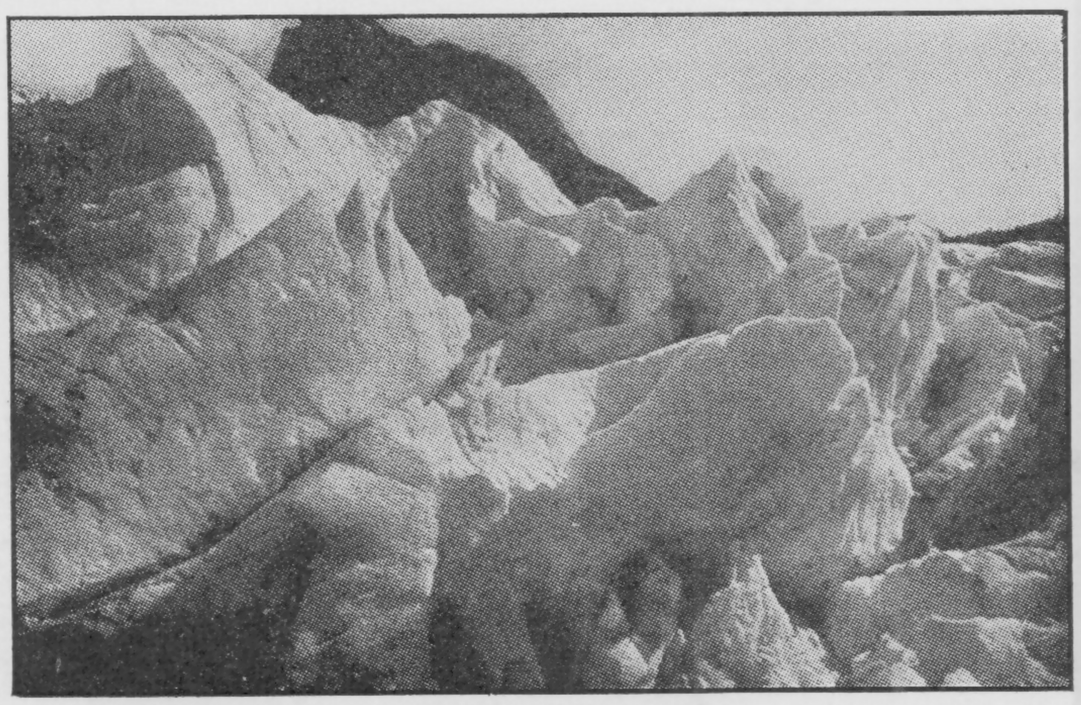
Besides wearing away the rocks, this stream serves as a channel to carry off surplus rain from the hills.

back to the boiler, thence to start forth again as steam, so the raindrops come back to stream and ocean and lake, to start forth again as water vapor.

The condition of the atmosphere, as to warmth, clearness, dryness, and the temperature of the winds which are blowing them along, modifies the clouds into several well marked and easily recognized forms. They are:

1. *Cirrus.* These consist of delicate streaks of a feathery appearance. They are usually seen in fine weather. Cirrus clouds are said to float six to seven miles above the surface of the earth. At that altitude the temperature is approximately 100 degrees Fahrenheit colder than at the surface of the earth, or 67° below zero. The cirrus clouds, therefore, are composed of nothing but ice particles.

2. *Cumulus:* These are the great billowy masses seen in summer; which when lighted up by the sun look like snow mountains. The reason for this form is that during the heat of the day the currents of warm air rising from the earth are larger, and rise higher; and when the water in them condenses, it forms these massive clouds. Steam rising from the boiler of a locomotive will exhibit this form. By evening this form of cloud is usually altered. This is due to cooling.



The Solid Form of Water

Ice is at the other extreme of temperature from steam.

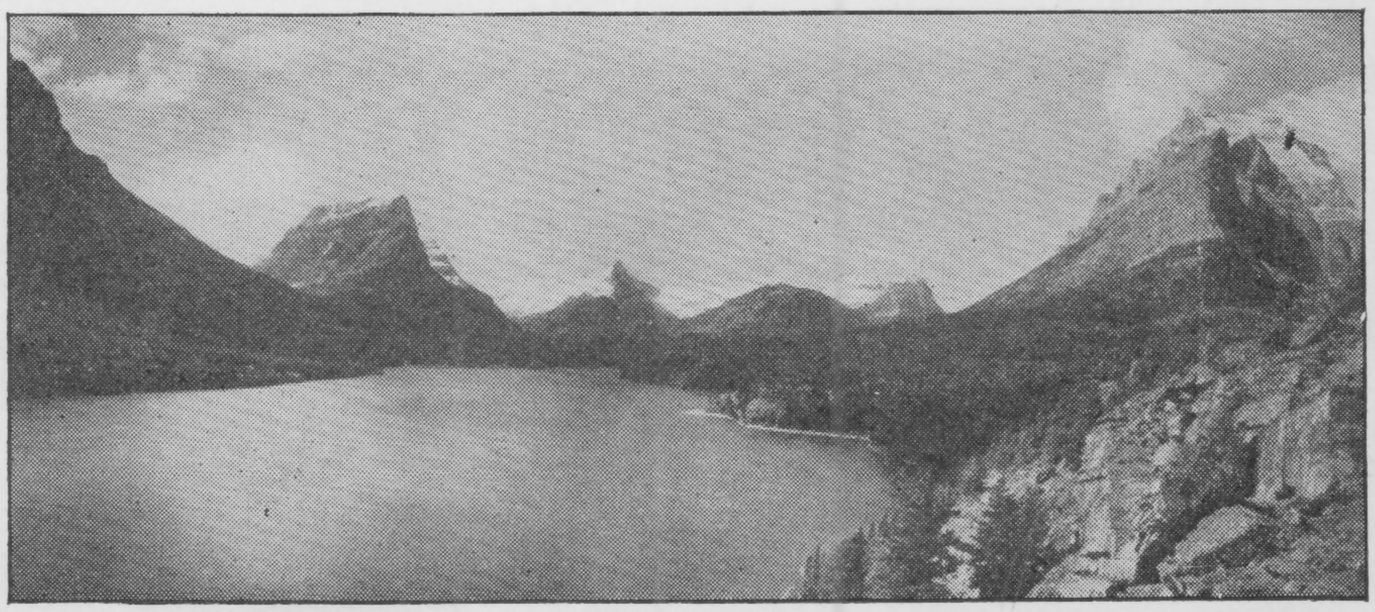
3. *Stratus:* This form consists of horizontal streaks or layers of vapor which float like a veil apparently near to the earth. They are often seen highly colored at sunrise or sunset.

4. *Nimbus:* The nimbus is our common rain cloud. It has no characteristic form. It is extended, and usually very dark. Clouds vary in elevation from one to six miles, although the stratus and nimbus often seem to lie even closer. By study it is easy to tell whether they are high or low.

WATER

Rain:

The air above the earth is always in motion. There are currents of air, some high and some low, some warm and some cold, going in various directions. It is quite possible to look up into a summer sky, and see *cirrus* going in one direction, while *cumulus* or *stratus*, miles underneath, are going in another, quite opposite direction. You will understand, then, that cumulus or stratus *might* meet face to face with a cold current, coming from a point thousands of miles away. When that happens, the cloud water vapor condenses, the clouds become darker, as a yellow sponge becomes brown when soaking wet, and then it needs only a little colder temperature to make the vapor particles cling together and form drops too large to be held suspended in the cloud. When that happens, we say that rain falls. If the drops encounter cold weather near the earth, snow or hail results, depending on whether the cold is constant or passing. If it is winter, of course it will be snow, but hail may result in the summer, when the drops pass through an icy current of air.



St. Mary's Lake, Glacier National Park

This lake is caused by rain filling up a natural hollow or pocket in the hills. The famous Swiss lakes are similarly formed.

An Interesting River Channel

A river gorge. The top of the picture at the right shows the depth of excavation. The amount of rock carried away to make soil can be imagined. The two rocky points in the center show where the river has broken through a weak spot in a hard wall. The horizontal layers, or "strata" of rock may easily be seen. In the foreground, at water level, is a flat shelf of hard rock which is resisting water action. Try to imagine how the trees got into the places some of them occupy in this picture.

The rainbow is an arching bow of light usually seen in early morning or late afternoon, after a rain. If the rain is in the morning, and the storm is passing toward the west, the rainbow will be seen towards the west. In the afternoon, if the storm is passing towards the east, the rainbow will be seen in the east.

The rainbow is caused by the refraction of sunlight through the raindrops, and the breaking up of the white light into the three primary colors, red, yellow and blue, and the four secondary colors, orange, green, indigo and violet. The order of colors in the rainbow is therefore:

violet
indigo
blue
green
yellow
orange
red

QUESTIONS ON CLOUDS

CLOUDS

1. What is meant by "evaporation?"

2. What is steam? Can you prove that it is made from water? How?

3. What color is steam? How can you see it?

4. What is "condensation?" When there is much steam in the kitchen on a cold day, in what condition will you find the window-panes? Why? What has happened?

5. How are clouds formed? Where does the vapor come from?

6. How can we prove that the sun really does change water into vapor?

7. What things determine the form of clouds?

8. Name four different forms of clouds. Describe each form.

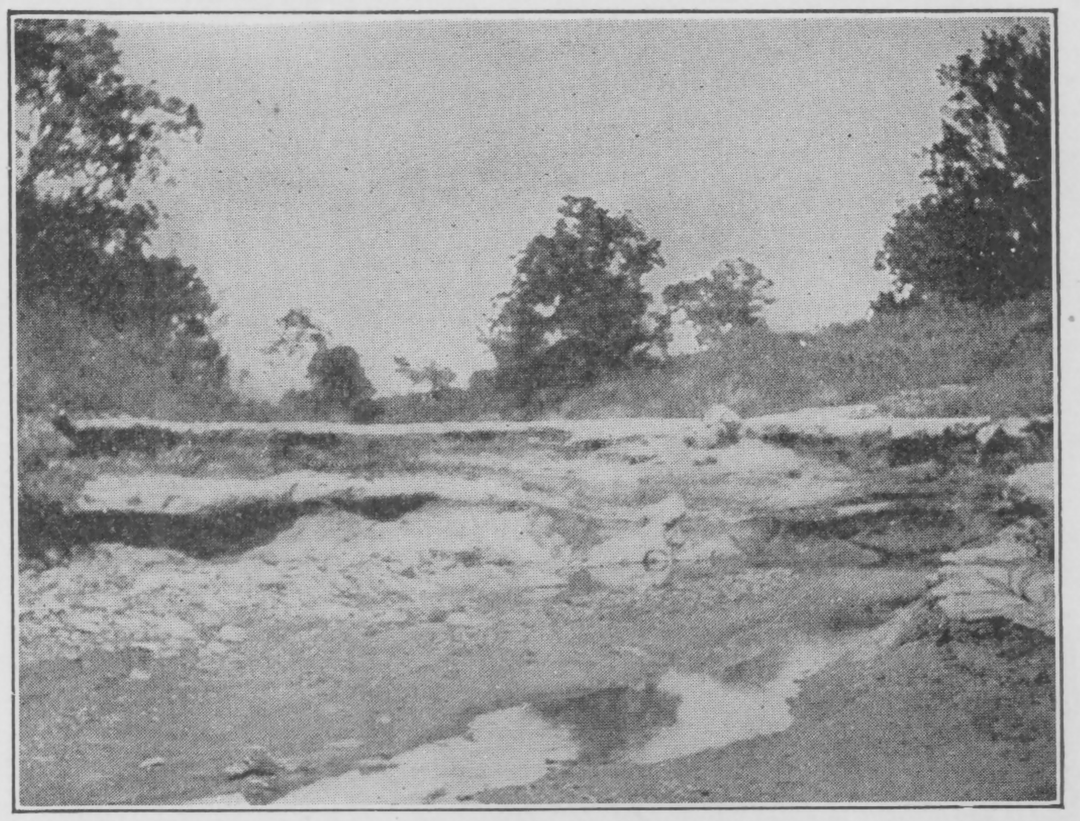
9. Which form is highest in the air? Lowest?

10. Which form is coldest? Warmest? Which has the greatest amount of moisture? The least?

In the mist over a waterfall the rainbow may be seen. Rainbows can be made at home by letting the sun shine on a beveled handglass, or a three-sided piece of glass (called a prism) or on a cut glass stopper.

Uses of water: First, it is a cleanser—animals and plants, as well as men, like to bathe in water. The rain washes the dust from the leaves, so that the sun can get to the chlorophyll, and so that the breathing pores of the leaf may be clean.

Water quenches the thirst of plants and animals. It constitutes the principal element in every part of creation. The earth is three-fourths water and only one-fourth land; our bodies contain much water; the blood is largely water. Milk is ninety per cent water. Fruits and vegetables are largely composed of water. The sap of trees is largely water. Roots get their food from water, which dissolves the plant foods in the soil, and thus makes it possible for the plants to drink them.



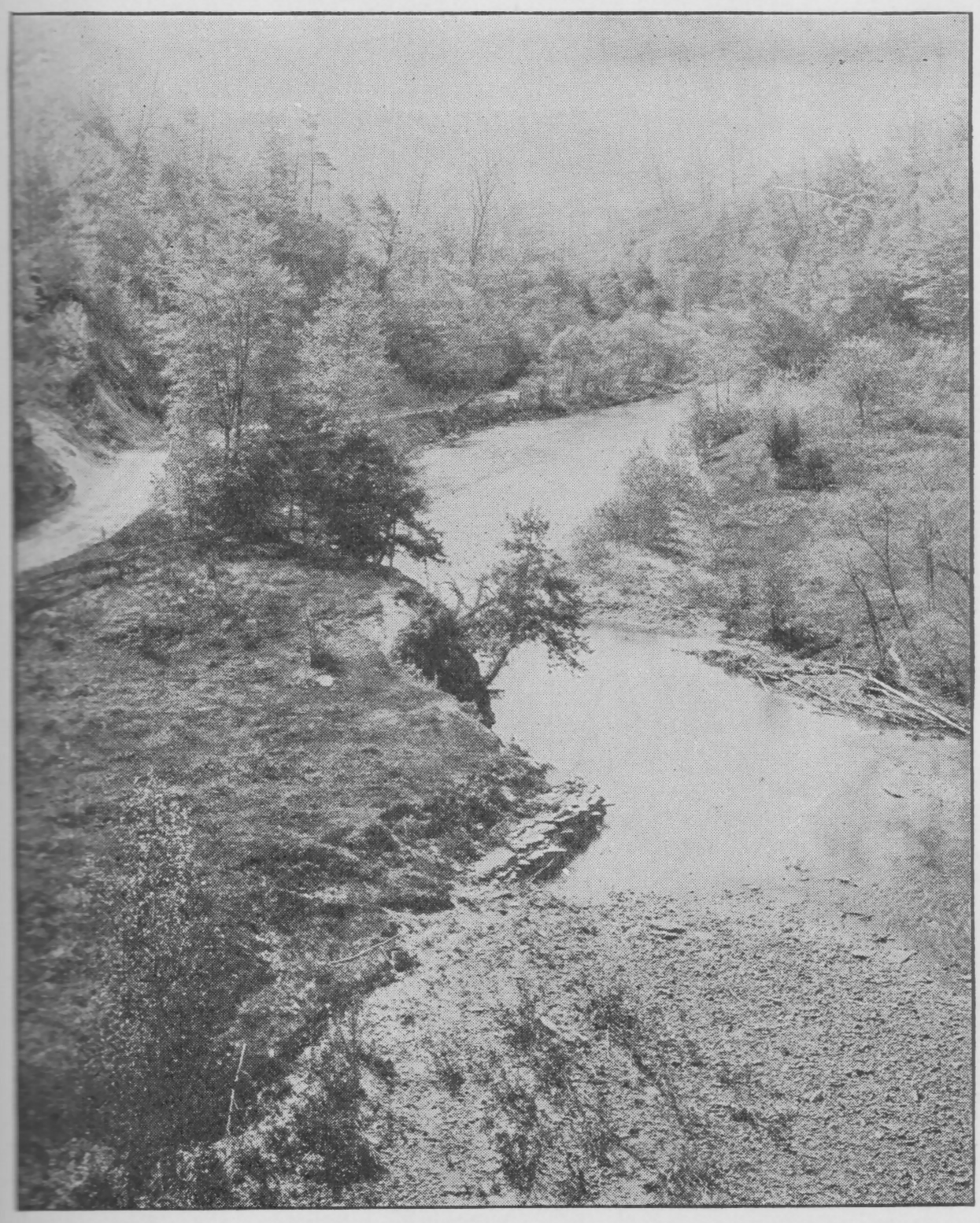
Deposition of Material upon Slacking of Stream

"Where men foolishly take away the trees, the water strips the soil from the earth's surface, leaving the rock bare."

Water has many uses. We sail over the seas; we use water in our boilers to propel our ships; we use water power to run our mills. We use ice, which is only the solid form of water, at the other extreme of temperature from steam, to preserve our foods from decay.

Water forms the home of lobsters, shrimp, oysters, clams, and the numerous forms of fish which are used for food.

In various places we find so-called mineral springs. These are springs of water which, down in the heart of the earth, have met with and dissolved various mineral substances, some of which have a value as medicine. Other springs are hot springs. They have come in contact with the fires that light the interior of the earth, and come up to the surface steaming hot. When people have certain diseases they bathe in these springs. Many of them are cured.



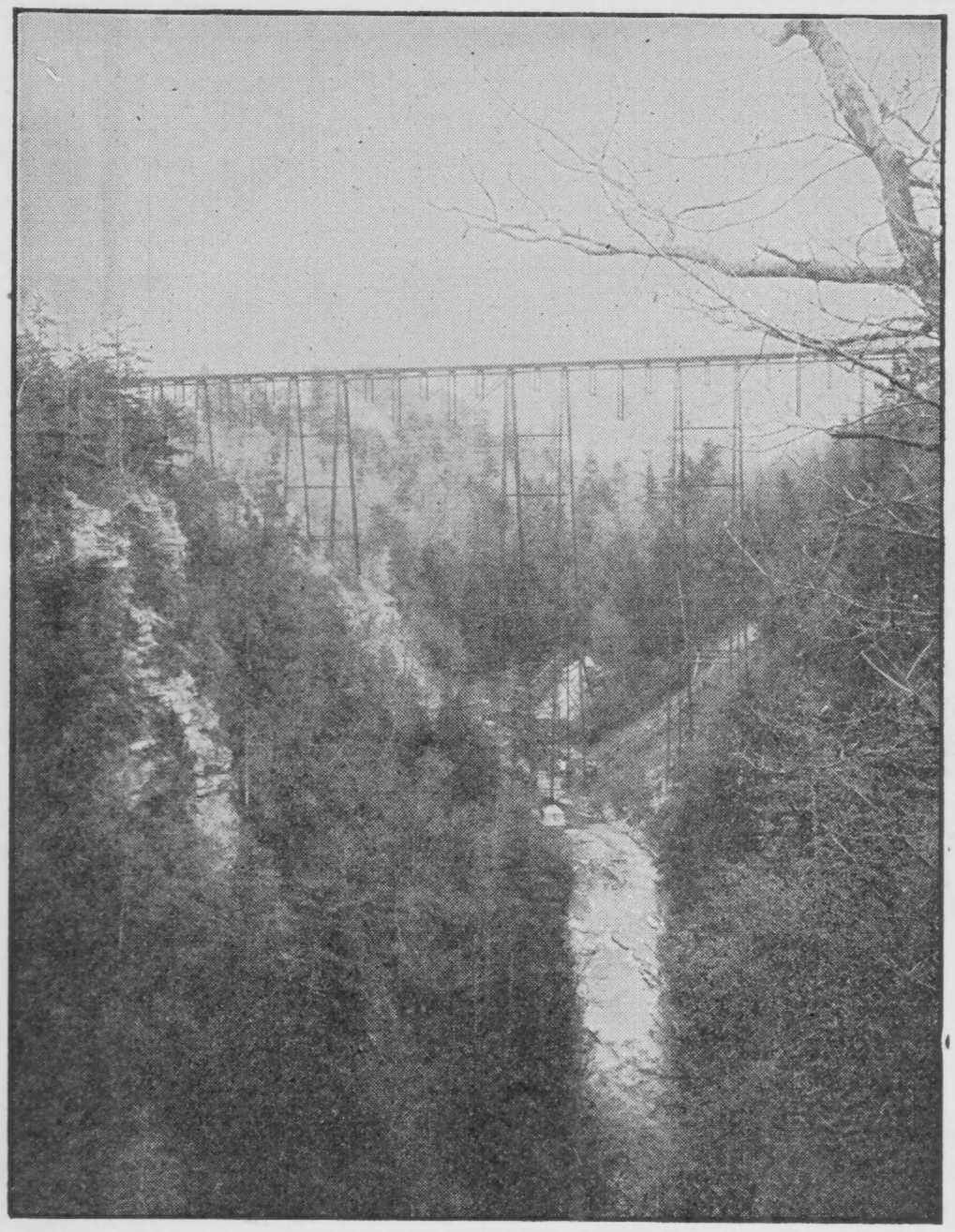
Another Example of Erosion

This is a good example of the stream which is active in eroding and carrying soil only in flood-time. In the right foreground is a bar of broken stones, brought down this far by the water and too heavy to be carried any farther. In the right center, the tree-covered flat soil was once a similar bar. The course of the river has been changed to curve toward the left, around it. The water is encroaching on the road, and if not walled up, will dig away the road

THE WORK OF WATER

Besides being the most useful element to man, water has definite work to do. One part of that work we saw in talking about springs. The other kind we call *erosion.* That is a word that means eating away. The water eats away the surface of the earth. "How destructive," you say; and "why do we not lose all the surface soil of the earth?" Well, partly because the water served to make most of it, in the first place; and partly because our friends the trees spread their protecting roots, like arms, over the soil, and will not let the water have it. Where men foolishly take away the trees, the water does strip the soil from the earth's surface, leaving the rocks bare. But, the soil was made by the water in the first place. How? It is an interesting story.

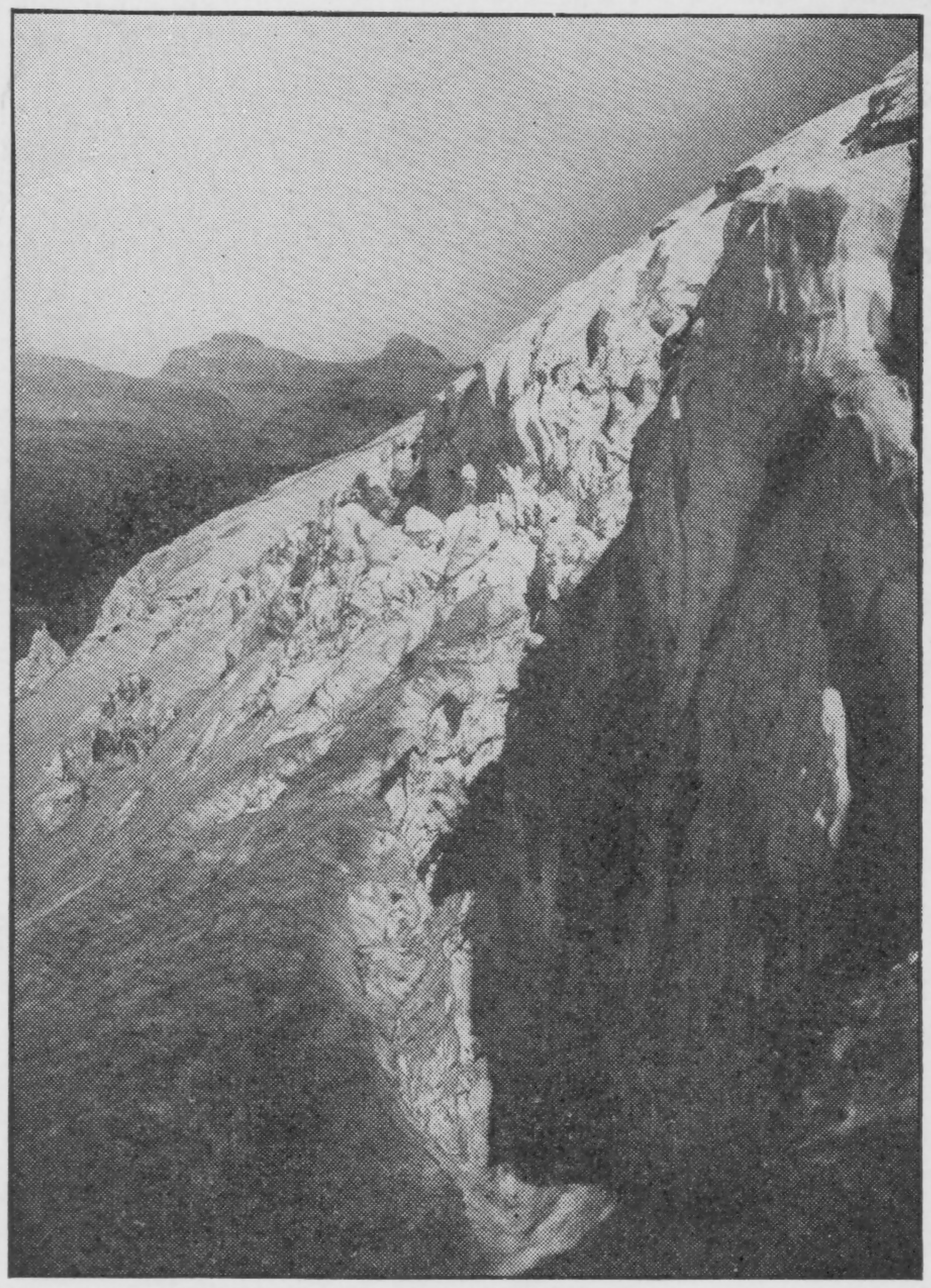
Let us go back to the beginning of our world. The mighty rocks into which the cooling earth-mass has hardened are thrown



An Example of Erosion

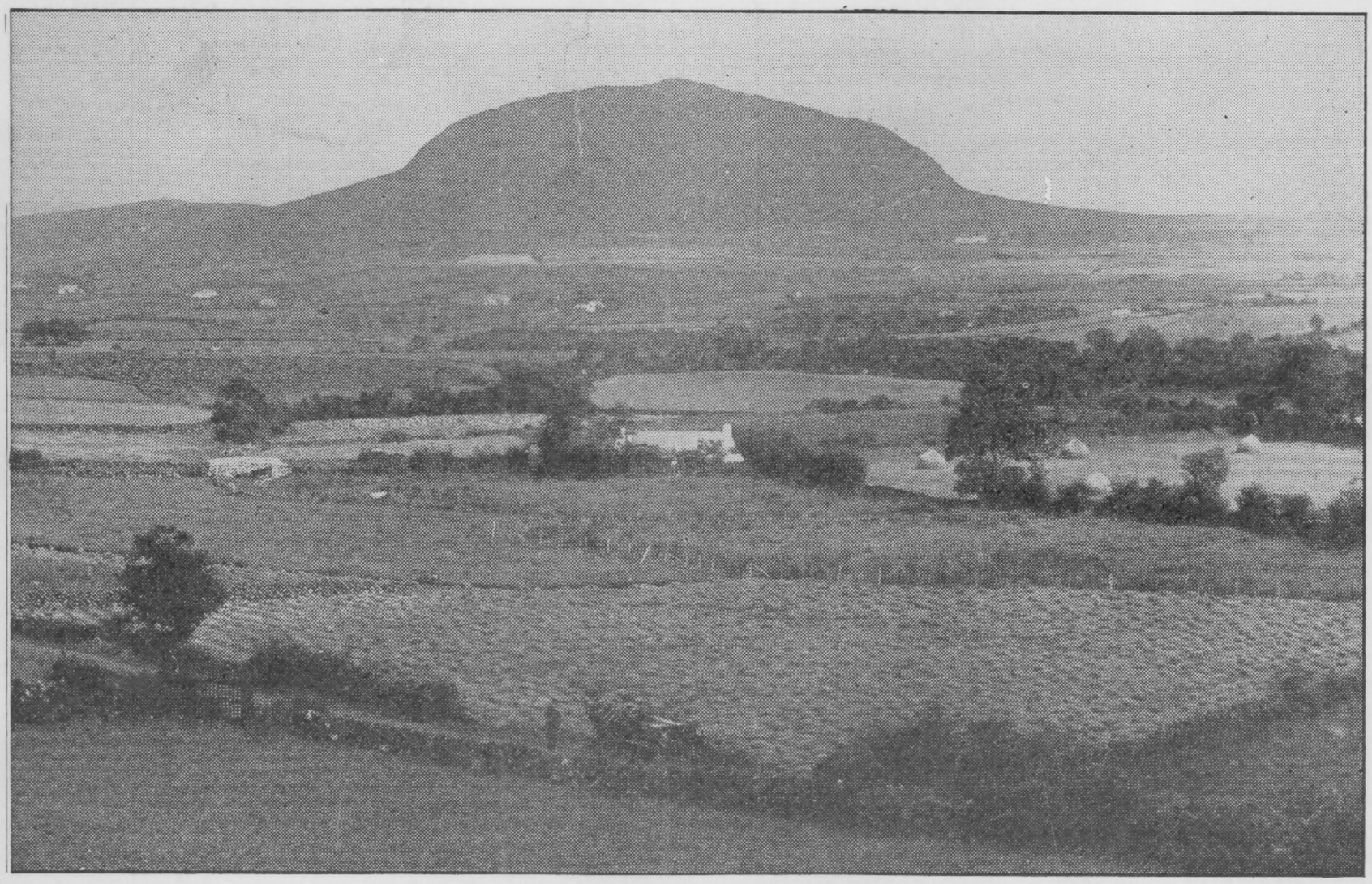
A natural gorge. The bridge is the base of a triangle of which the river bed is the apex. That triangle represents the rock and soil which this stream has excavated and carried away.

by the shrinking of the mass into great mountains and valleys, and over all hangs a mighty cloud of steam. It rains constantly; and the heated rocks send back the rain as steam. Finally the earth is cold, and the vapors condense and fill the great earth valleys, making the seas and lakes; and the blue sky appears. The world is one great rock, in the midst of warm seas. The sun at once begins to draw up water vapor, and clouds float in the sky.



Blackfeet Glacier

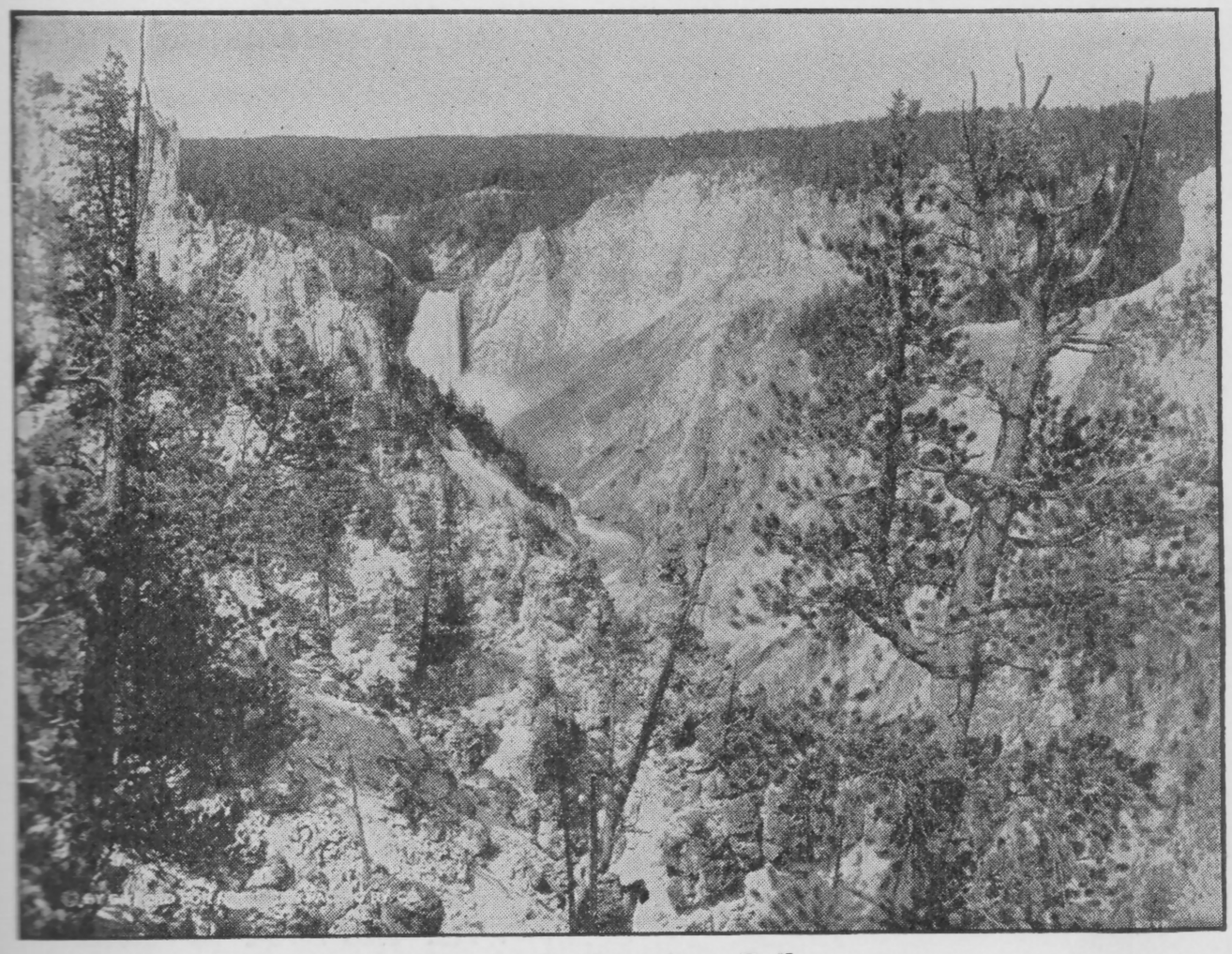
This glacier is in Glacier National Park. The snow and ice, traveling by force of gravity down the mountain valley, act like a scraper, carrying rocks and soil down to the lowlands. Where the glacier melts, there the soil is deposited.



Flood Plain

This represents the final step in the leveling action of water. These meadows are covered with soil washed down from the hills. The river can no longer carry soil except in flood. The rounded hill in the background has resisted erosion; it is presumedly of some hard rock.

Rain, snow, hail and ice form, and the transformation of the earth's surface by water has begun. The rocks are heated by the sun and cooled by the rain and frost until cracks appear. Water gets in those cracks and freezes and breaks off large boulders. These fall to the foot of the cliffs and are broken. Those that fall on the sea beach are pounded by the waves against the shore cliffs until they are broken into bits. Those that fall into land valleys are washed down by rivers, which are



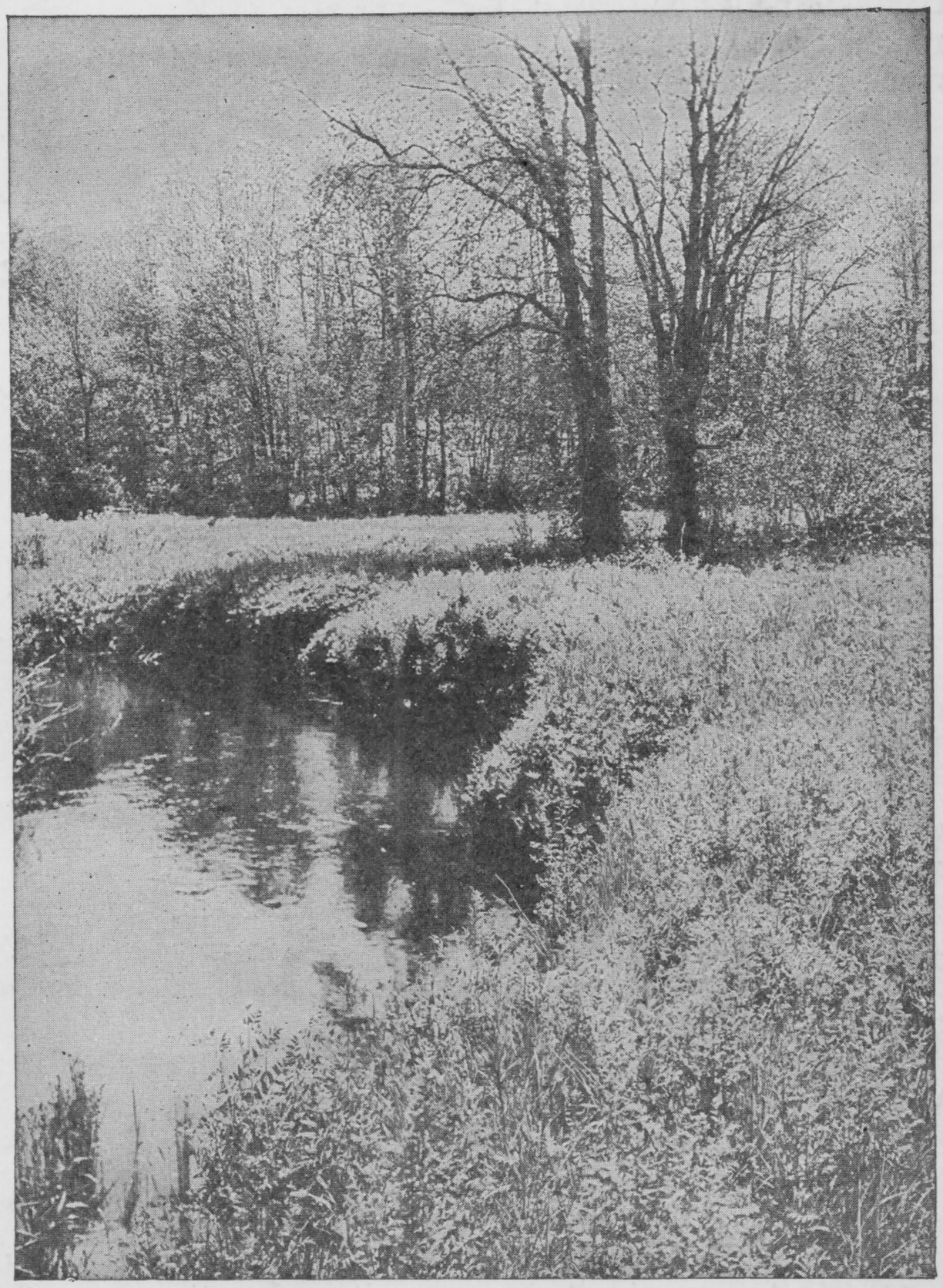
Lower Yellowstone Falls

This majestic gorge has been hollowed out, through the centuries, by the river. The falls mark the position of a harder resisting layer of rock which wears down more slowly than that below.

merely drainage canals for the rain and snow of the mountains. Some of the substances in the rocks are dissolved, as lime and potash, and the other substances crumble, as do sandstone and shale. Some of the rocks thus form soil, which is carried down into the valleys by floods, and deposited over the rocks, in this way preparing a place for plants to grow. The rivers too, start digging a deeper channel for themselves. All the material thus dug out by water is carried down toward the sea, and deposited on the river or sea bottom. In the course of the centuries it hardens into rock. Then, perhaps, an earthquake may lift it again above the surface of the ocean, as, for example, the Philippine Islands have been lifted, and the work of water begins all over again. When soil has been formed, plants begin to grow, and then animals come to live on the earth. Finally man appears, and finds the world ready for his use, with plants and animals ready to serve him.

But has the water stopped working? By no means. Look out in the meadow in the summer time, and see how green the grass is beside the brook. Look at the river in the springtime when it is in flood, and see how muddy it is. Where does that mud come from? Where is it going to? It comes from the hills and fields, and is washed down into the brooks by the spring rains. It is going to float along in the water until the river gets down to the level land where it goes very slowly, and then it will settle to the bottom and fill up the channel. Some day that river will get so full that the flood waters will cut a new channel for themselves, and then the old bed will become a meadow and will be part of the farm of the man who owns that field. Then the water has stolen that land from up-river, and presented it to somebody living down-river? Exactly so.

"How can we stop that?" Very simply. By planting trees on the hillsides where once the forests used to be. The hills shed the water now like a house-roof; and so every heavy rain means a flood, and means that the soil is dug from the slopes and carried away to enrich some field miles away down the valley. Trees act like sponges. Their roots make a network in the soil, to hold it together. They re-enforce it, like the iron rods in concrete walls. The dead leaves on the ground soak up the rain that falls, allow it to sink slowly into the soil, and instead of pouring into the river in a day, to find its way into the vast underground lakes and rivers,



Formation of a Swamp

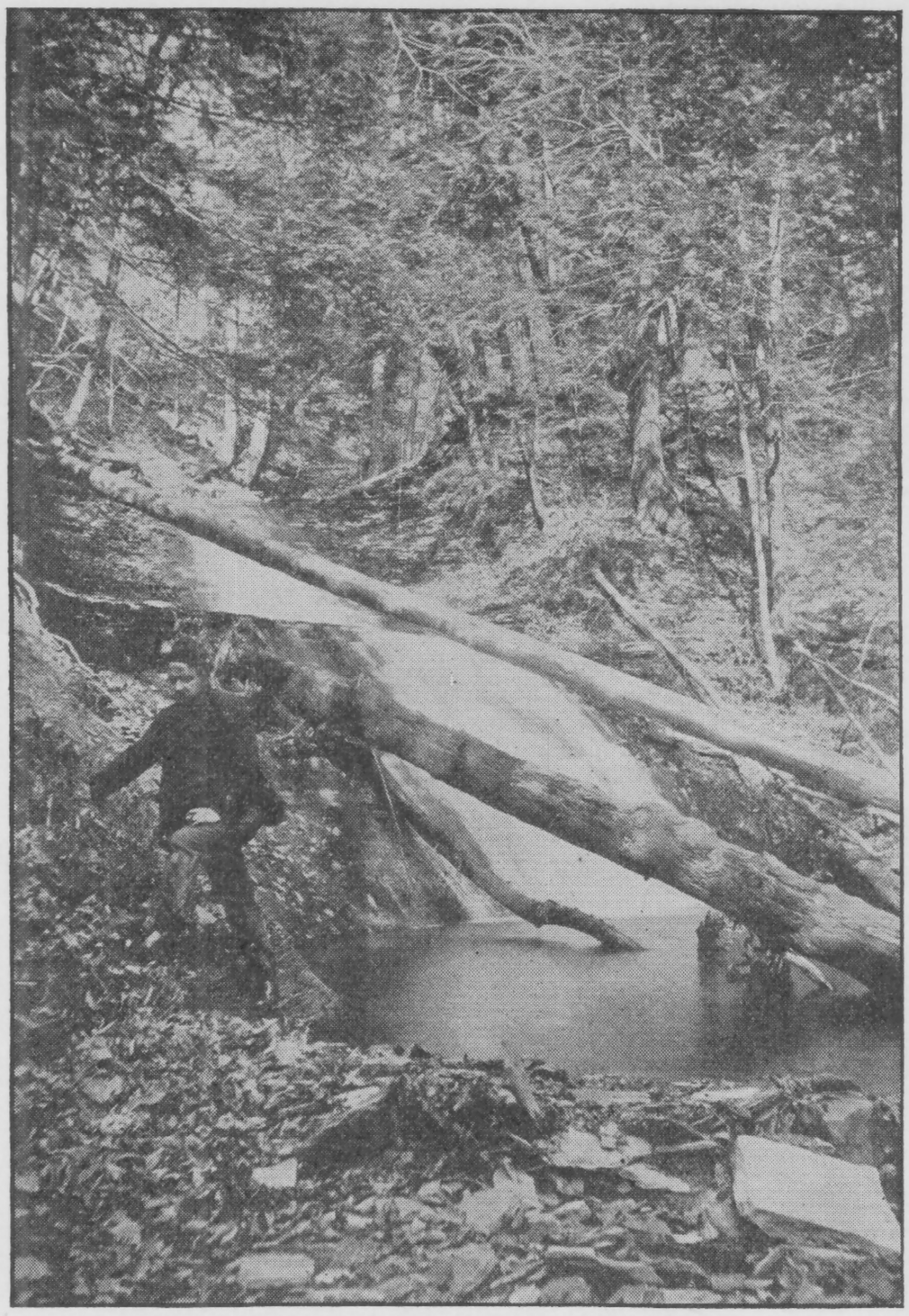
These water plants are choking up the stream, and will some day form a swamp. The decayed plants will form humus. In Ireland there are swamps in which the humus has hardened into "peat," which is like what coal must have been, ages ago. Peat is used for fuel.

and so keep the springs flowing all the year round. In this way the soil is preserved, the water is saved, the springs do not dry up in the summer, and there is no dry season to kill the crops.

TREES

We have already seen that trees are very valuable. We have learned that their breathing purifies the air for us to breathe, that their root arms hold the soil on the hills, and that their leaf garment over the earth holds water like a sponge, for the other plants and for man. Trees have many other uses. First, the decayed leaves, branches and trunks of trees are the richest kind of soil. The rich black soil that we call muck is composed of decayed and well mixed *tree soil* which is called *humus.*

There are four classes into which we may divide trees, to get better acquainted with them.



Work of a Mountain Stream

This mountain stream, during the flood season, not only carries sticks and stones down the valley, but uproots trees, which some day will be turned into humus soil.

These are:

Fruit trees, as apple, pear and peach.
Shade trees, as elm and maple.
Nut trees, as chestnut and hickory.
Lumber trees, as hemlock, pine, and ash.

We should learn to recognize trees by the leaf, the flower, and the fruit. Lumbermen also recognize trees by the bark and by the "look" of the wood itself. I have named one or two familiar trees under each class. These should be learned, and as many more as possible. Some might be classified in more than one way, but that does not make any difference. We wish to remember them for their most common value.

SEEDS

The most valuable, and also the most interesting part of a plant is the seed. It is the most valuable because it is so often the part that is good for food, or else some part connected with the seed is eatable. For example, all the common fruits, the apples, pears, peaches, plums, grapes, oranges; and the more unfamiliar ones, such as dates, figs, pomegranates and cocoanuts, which grow on palm trees; and the cucumbers, melons and squashes, which grow on vines: all of these widely scattered varieties enclose their seeds in an edible pulp, or "meat." Animals, birds and men seek them out for food.

The seeds are the most interesting because the plant reproduces itself through the seeds. I mean by that, that new plants are grown by planting the seeds in the ground. In the case of garden plants, either flowers or vegetables, that may be very

QUESTIONS ON WATER AND THE WORK OF WATER

WATER

1. What are air currents? Can you tell what causes the air to form currents?

2. When the air moves steadily in one direction, what do we call it?

3. How do we distinguish, by name, between fast and slow currents?

4. How are clouds forced to let fall the moisture that they are carrying?

5. What forms may that moisture take?

6. What is the rainbow? How is it formed?

7. Name the colors in the rainbow. What is that arrangement of colors called?

8. What is a prism? How can it produce the rainbow colors?

9. Name as many uses of water as you can.

10. How are springs formed?

11. What are mineral springs? Hot springs?

12. What are the uses of these springs?

THE WORK OF WATER

1. What is erosion? How does water eat away the surface of the earth?

2. How do trees preserve the soil from the action of water?

3. Can you describe the steps in the formation of the rocks? Was it a long or a short process?

4. Is the formation of soil today a rapid process?

5. Do the hills change their form? How do you know?

6. How do rivers carry rocks and soil in the spring?

7. How can we stop the water from carrying away soil from our hillsides?

easily seen. Corn, beans, peas, lettuce, squash, cucumbers, melons—all are planted and cared for in order to have the vegetables later, to eat. For the home garden, tomato plants are usually bought half-grown; but they grew from seeds just the same.

It will be very interesting to watch seeds begin to grow. Take a few ripe seeds of corn, beans, or peas, soak them until they begin to swell, and then place them on wet blotting paper, in a place where there is plenty of light. Keep the blotting paper wet. Soon the skin of the seed will split, and two tiny leaves will come out. A little root will also show. It will be possible in the case of the bean to split the seed into two parts, before it sprouts, and show the tiny leaves in place.

WEEDS

The farmer says that weeds are a nuisance; the gardener says that they are a crime; but the dictionary says that a weed is any plant that is out of place, that has intruded where it is not wanted. So, in the hayfield, buttercups and daisies are weeds, because they do not make good hay. In the garden, any plant that is not good to eat is a weed. On the lawn, dandelions are weeds; but in a field by themselves, if they could be kept there, they would pass for a respectable vegetable, and not a weed at all; for they certainly are good to eat.

Now, if all plants grow by seeds, and weeds are plants that insist on entering places where they are not wanted, it follows that if we can keep them from producing seeds we can control their growth, or else do away with them altogether. That leads us to the very delightful study of how plants produce their seeds, and how they manage to get them scattered widely. That is just as necessary to plants as to produce seeds. Seeds must have room to grow; and if all seeds fell, year after year, under the parent plant, not even grass could spread and cover the bare soil of the fields. So plants have invented ways by which the seeds may be widely scattered.

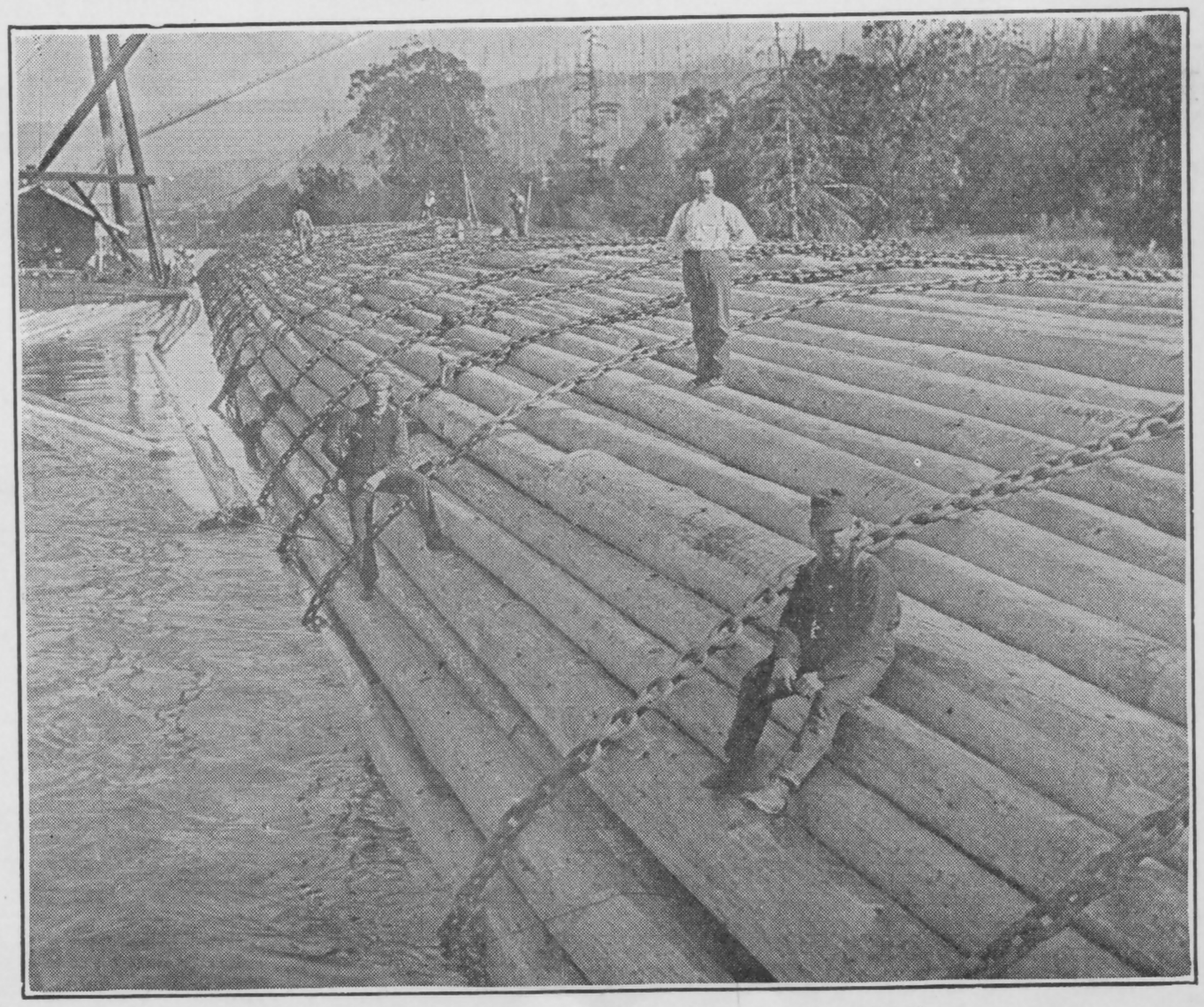
First, how do plants produce seeds? If you will take any large flower of the open or lily shape, and look in it, you will see that there is a ring of little stalks, each with a head covered with yellow powder. In the center is a stalk, whose base is a swelling in the bottom of the flower. The little stalks are called *stamens*, and the powder is *pollen*. The central stalk is the *pistil*, and the swelling at the base is the *ovary*. Here is where the seeds are formed. When the flower is open, the pollen falls on the pistil, and, in some way, fertilizes the seed-germs, so that the seeds develop and ripen. The ovary becomes the fruit, in the varieties named above. In the grasses, including the valuable grasses classed as grains, such as oats, wheat and rye, the ovary develops into a grain, or seed.

Bees, wasps and bumblebees help in the process of putting the pollen on the pistils of flowers, as they climb in and out of the flowers, looking for the sweet juice of the flower called *nectar*, of which they make honey. They get pollen on their legs, and then rub it on the pistil of the flower as they crowd in, looking for nectar.

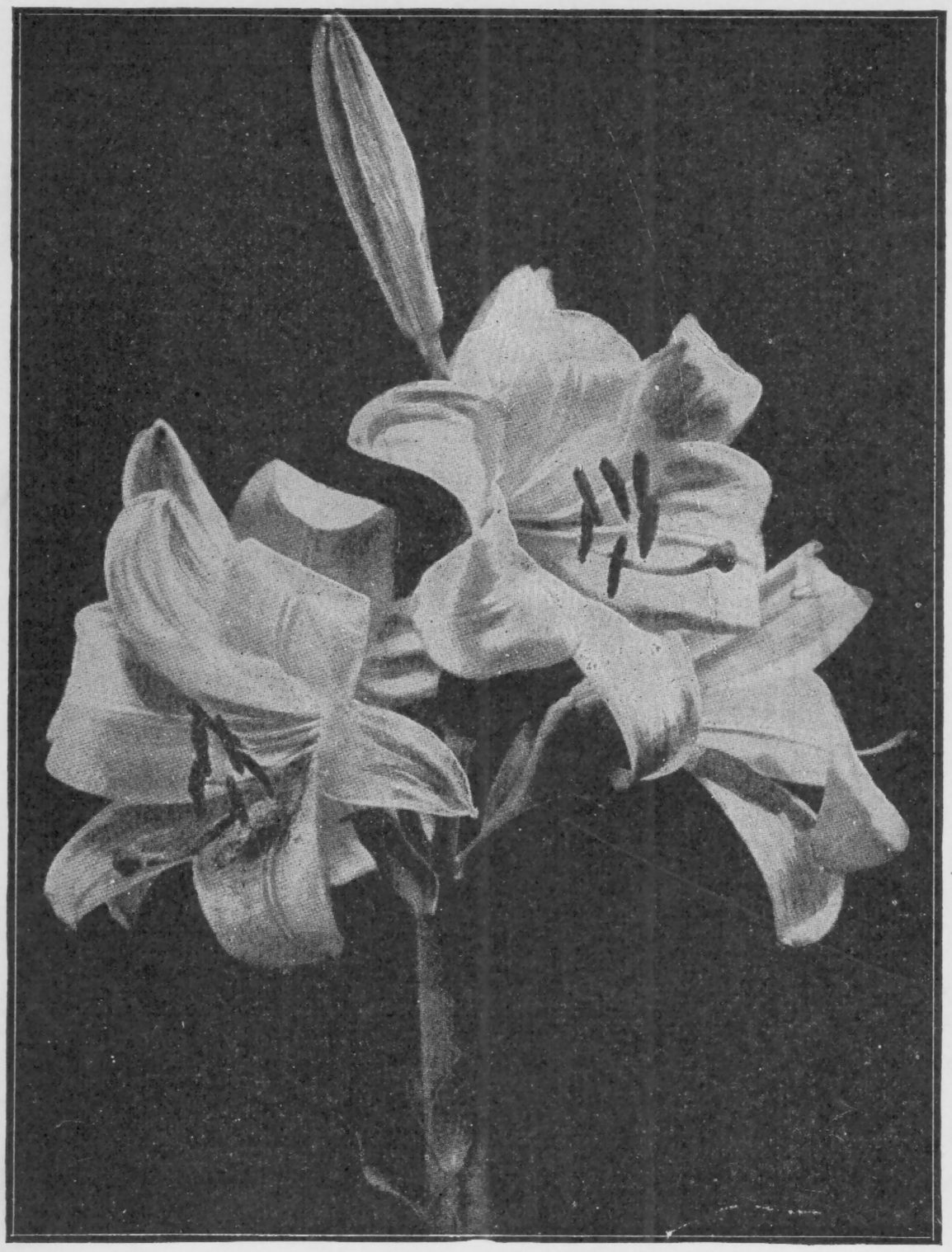
Many seeds are blown about by the wind. Grass and like seeds are of this class. There are plants whose seeds form within a ball, which rolls along the ground and drops seeds as it goes. This plant grows on the sea beach. Dandelion and milkweed have little cotton sails on which the seeds float through the air. Burdocks and some others have little burrs covered with hooks. The seeds are in the burr. The hooks catch on to the clothes of persons, or the hair of animals, and thus are carried long distances, distributing seeds as they go. The wild berries are eaten by the birds, and the seeds which the berries contain, which are indigestible and therefore unharmed, may be deposited by the bird a thousand miles away from where they grew. These are some of the common ways in which seeds are scattered. It will be worth while to try to discover by observation other ways by which seeds are distributed, and other forms in which seeds appear.

CLOTHES

It may not be possible to teach the child all about the manufacture of different kinds of cloth, even when he has reached a point where he is ready to comprehend more or less of the processes. The



Raft of Logs Being Floated to the Saw-Mill



Flowers Showing Stamens and Pistil

best way to do this, in any case, is to visit a manufactory and see the actual operations. A shoe factory, or a "made to order" clothes manufactory would prove wonderfully interesting and instructive.

However, there are certain things that may be learned.

First, there are, in general, four sources of material for clothes. They are:

1. Plant fibers.
2. Animal product—silk.
3. Hair of beasts.
4. Skins of beasts.

Cotton:

Cotton is a fiber of a plant which is closely related to the common hollyhock. It was first seen by the famous traveler, Marco Polo, in Asia, about six hundred years ago.

When our country was settled, about three hundred years ago, people had already learned to make cloth of the cotton, so it was brought to this country, and planted in the warm, moist lowland plains of the south. Two kinds of cotton are grown in our country—sea-island cotton and upland cotton. Sea-island cotton is grown on the islands and low coastal plains of South Carolina, Georgia and Florida. The fiber is longer and finer than that of upland cotton, and is much used in making thread.

Upland cotton is grown in large quantities on the uplands lying between the Atlantic and Gulf coastal plains and the Appalachian mountains. The state of Texas, which is the largest state in the Union, grows the most cotton. The seed is planted in March or April. This takes a great deal of preparation of the soil. The land must be ploughed and harrowed very smooth. Then it is bedded up into ridges four feet apart. After all danger of frost has passed, the seed is sown in the ridges by a machine.

As soon as the young plants have grown enough to have four leaves, they must be thinned by hand. The blossoms come in July or August. They are cream-colored at first but change to pink and red. In three or four days they have become fertilized, and the colored petals fall off. The ovary, which is here called a *boll*, begins to grow. It grows to be as large as a hen's egg. The boll has from three to six cells, which contain seeds wrapped in a soft, white, downy substance which we call the cotton fiber, or lint.

When the seed is ripe the bolls burst open, and the stalks are then covered with white balls, which are very pretty. It is very probable that this is Nature's provision for getting the seed scattered, as the cotton would be carried away by birds for nest building. The cotton is picked by hand, as no machine has yet been invented that will do the

QUESTIONS ON TREES AND SEEDS

TREES

1. Name some of the important uses of trees.

2. What do trees breathe out into the air?

3. What does the leaf blanket over the soil do?

4. What do we call decayed leaves? What is it good for?

SEEDS

1. How many fruits can you name? What form has the seed in each case?

2. How many vegetables can you name? Do they grow from seed?

4. Describe a method for making seeds sprout. What two parts always appear in a sprouting seed?

5. What are weeds? Why are they a nuisance?

6. How can you tell if a plant is a weed?

7. Name the principal parts of a flower. What is the use of stamens; of pistil; of ovary?

8. How do insects help to fertilize flowers?

9. Do the grains, as oats, wheat and rye, have flowers? What color are they?

10. Of what use is perfume to a flower?

11. Why are the petals of flowers often colored?

12. Tell as many ways as you can in which seeds are distributed.

work. The work is not hard, and is done by men, women and children. Pickers vary from fifty to three hundred pounds of cotton per day. One hundred pounds is considered a fair day's work. The pickers are paid from forty cents to one dollar for each hundred pounds of cotton. It takes three pounds of cotton to make one pound of cotton fiber after the seeds have been removed, so you will see that cotton picking, while not paid very highly, is very expensive for the planter.

The seeds are tangled in the fiber, and have to be removed before the fiber can be spun into yarn. This used to be done by hand, and was a very slow and expensive process, one person being able to

Flower of the Cotton Showing Boll Forming

clean only one pound of cotton in a day. In 1793 an American by the name of Eli Whitney invented a machine called the cotton-gin which does this work. Three men with a good cotton-gin can clean ten thousand pounds of cotton in a day. The gin is arranged with sets of teeth like combs or saws, which pull the lint off the seed. Brushes sweep the lint from the swiftly moving saw teeth, and a fan blows it back into a room prepared for it. It is then squeezed into great bales, and shipped to the cotton mills.

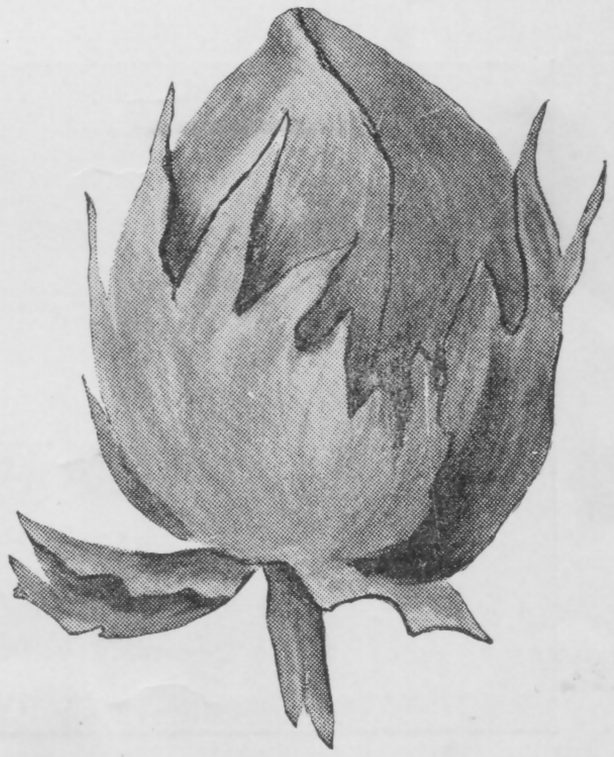
Formerly the cotton seeds were wasted, but many uses have now been discovered for them. They are heated and ground, and the oil squeezed out. Then they are pressed into cakes to be used as a food for animals and as fertilizer. The cotton-seed oil is burned in miners' lamps, made into soap in place of cocoanut oil, and used in cooking in place of olive oil.

The mass of cotton in the bales is composed of very thin fibers from half an inch to an inch and a half long. The first thing that is done in the mill is to clean the cotton, and arrange it in laps or rolls. The tangled mass is thus straightened out, and the very short fibers removed. The fibers are then spun into threads, two or more fibers of the cotton being combined into a single cord. It is said that a pound of cotton fiber may be spun into thread so fine that it will reach from New York to Chicago, a distance of one thousand miles.

An interesting fact just here is in connection with the common word "spinster," which we use to mean an unmarried or single woman. Formerly all the spinning was done by hand in families, and was the exclusive task of the unmarried women of the family. Hence the word has come to be a name for any unmarried woman, although spinning is no longer done in the houses. It is done by machinery, and there are in this country over twenty-two million spindles for the spinning of cotton thread, which are run by machinery.

Formerly weaving was done by hand-looms, great clumsy wooden frames on which the thread was stretched, but today there are more than half a million power looms for the manufacture of cotton cloth. In making cloth, long threads are first placed lengthwise in the looms. These are wound on spools at the further end. They are crossed by other threads. The long threads are called the warp, and the short threads that cross them, the woof, or welt. The interlacing of the threads forms the cloth. The thread of the woof is passed back and forth, between the threads of the warp, by means of a shuttle.

More cotton cloth is made in the United States than in any other country. Most of it is made in New England, in the cities of Fall River, Lowell, Lawrence, Salem, New Bedford and Manchester. Recently the South has taken up the manufacture of cotton cloth. We manufacture calico, gingham and sheeting. Much of the finer and more expensive cotton cloth we buy from England, France and Germany.

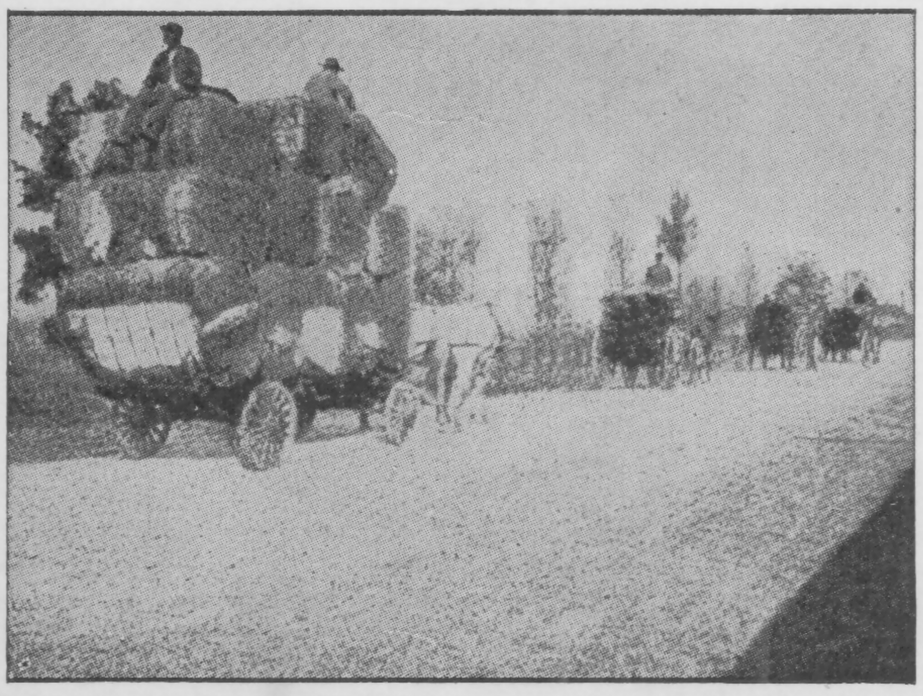


Cotton Boll

Cotton Picking

Wool:

The long hair of the sheep is called wool. In the Western states, and to some extent in the East, sheep are kept in great flocks. They wander over the hills, protected by a sheep herder and his dog. In the spring, when the winter coat is longest and least necessary, the sheep are sheared. Sometimes they are driven to the railroad stations to be sheared, thus carrying their own wool to the places from which it may be shipped. After the wool has been sheared, it is shipped to the factories where it is sorted. Then it is washed in lye and clean water to get the grease out of it, the dust is blown from it, and it is picked over by hand to remove the knots. Then the fiber is spun into yarn. In making woolen cloth, the wool is simply spun into loose thread. But in making yarn for worsteds, the wool is combed and twisted until the thread is very hard. The cloth is then woven in great looms that are like the looms for making cotton cloth. After the cloth is woven, it is soaked in water and soap, and beaten with wooden mallets to get out the oil and dirt. Then it is washed and dyed. It is washed again, and stretched upon frames to dry. It is then washed again, and pounded or rolled in order that the fibers may *felt* or crowd close together. This causes the cloth to shrink very much, but it becomes thicker. The cloth is then pressed, folded and packed, and is ready to be sold. Now that you see the greater work that is necessary in making woolen cloth, you will understand why it is so much more expensive than cotton cloth.



Cotton Bales Going to the Mill

Skins:

The raw skins of animals are called hides or pelts. Usually such skins as may be made into leather are called hides, while valuable fur skins, such as otter, mink, beaver, fox and ermine, are called pelts. Formerly buffalo, deer, elk and bear skins were plentiful, and were much used by the Indians and frontiersmen for clothing, but now they are scarce. The other pelts named above are found in Northern Canada. In 1670 a great company was formed by Englishmen, called the Hudson Bay Company, to buy pelts from the Indians. They were granted the entire territory watered by the rivers flowing into Hudson Bay, and for two centuries were the despotic rulers of the Indians, half breeds and whites, and fought trespassers bitterly. They became enormously wealthy. In 1870 the territory was ceded to the Dominion of Canada, under the name Rupert's Land.

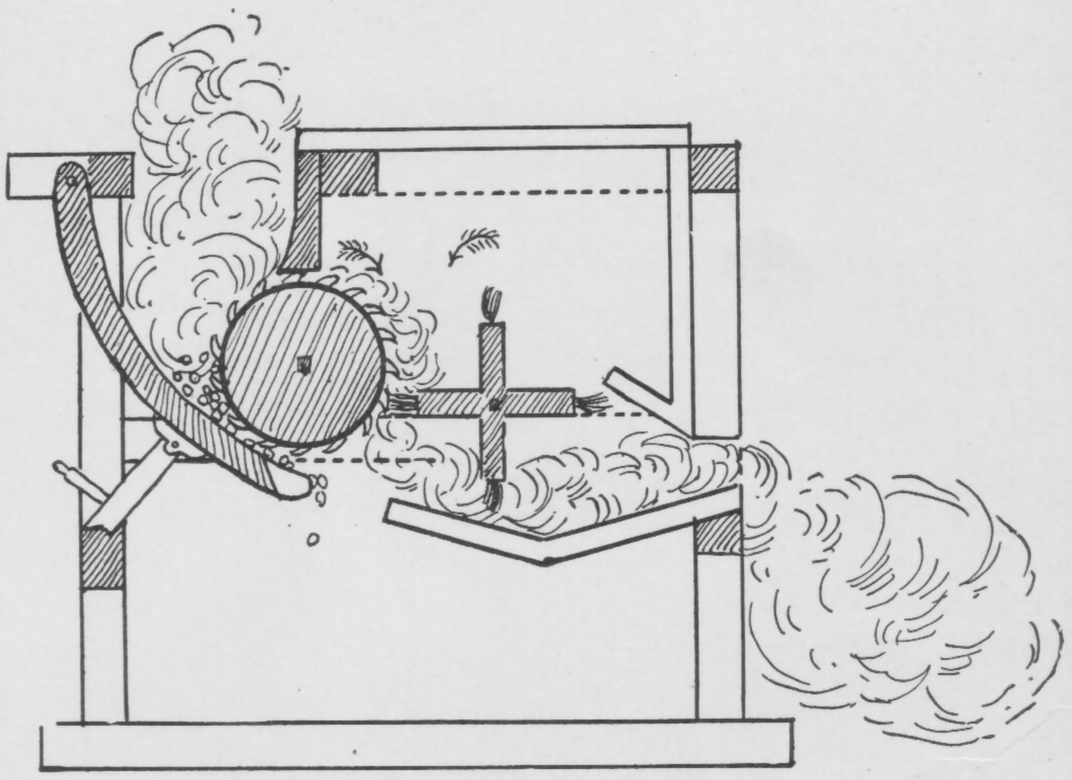
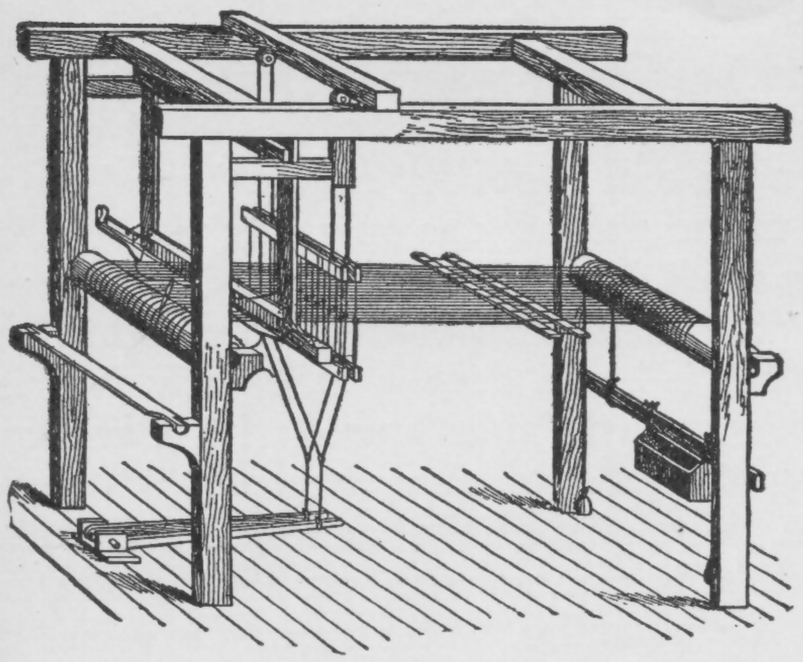


Diagram of Whitney's Cotton Gin

In the Northwest, in Oregon, John Jacob Astor founded Astoria in 1811. The business of the Astoria Company was, like that of the Hudson Bay Company, trading in furs. Astor connected his New York fur-trade with the Northwest by a line of fur stations extending along the great lakes and the Missouri and Columbia Rivers. His fortune at his death was estimated at $20,000,000. In those days furs were plentiful here, but scarce abroad. Today they are much more scarce here and higher in price. They are used for garments, hats, gloves, muffs and tippets.

Besides the hides from cattle, the trade uses the hides from sheep, goats, pigs, horses, kangaroos and alligators. From the skins of cattle are made boots and shoes, and harness. From pigskin, saddles, book bindings, hand bags, and even football covers. From the skins of sheep and goats are made leather for book binding. Dog skins are



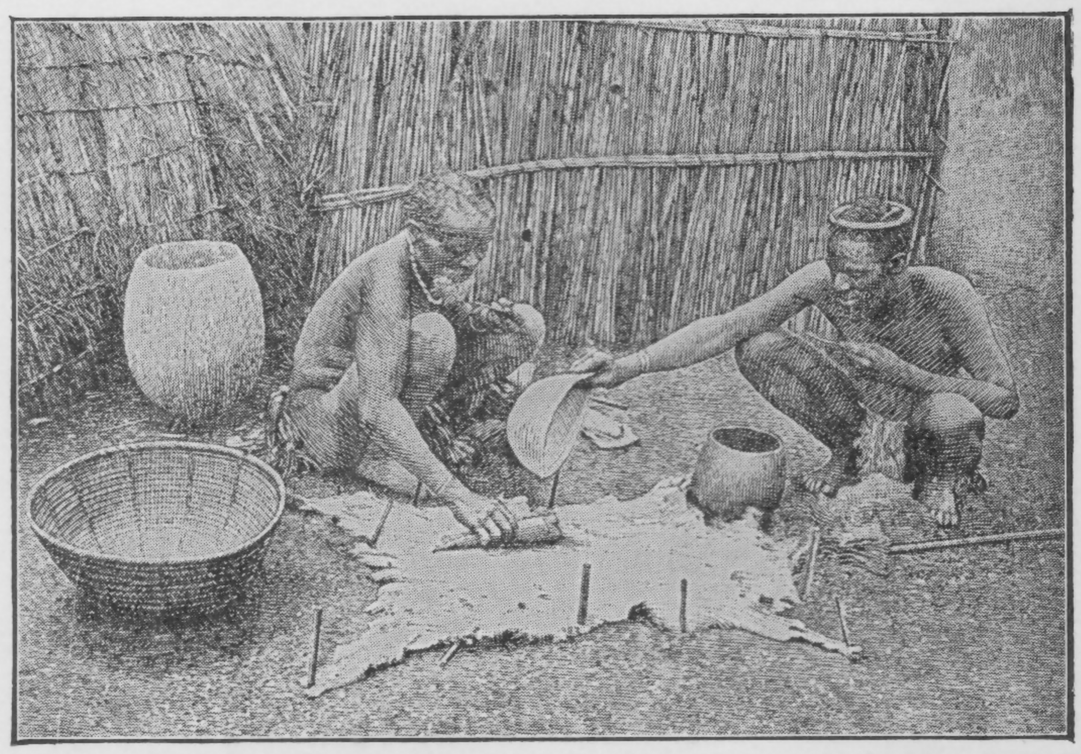
Model of Hand-Loom

used for gloves. Kangaroo and alligator leather is used for small fancy articles.

After the skins have been taken from the animals they must be carefully prepared before they can be used. They are green hides, covered with scraps of fat and flesh, and if not properly taken care of will spoil. This process we call tanning. The Indians prepared hides by scraping them, rubbing them with ashes, and then with the brains of the animal itself. They were able to dress deerskin until it was as soft and pliable as cloth. They ornamented it by sewing beads on it, in beautiful patterns.

In trade today, leather is tanned in great factories. The hides are first washed and scraped, and then are put to soak in vats of water, in which is placed the finely ground bark of the oak or hemlock tree. This bark contains a substance called *tannin* which preserves the skin from decay. From this comes the word "tannery." The hides are soaked in the liquor of this ground bark for a couple of weeks or more. Then they are washed and dried. The leather is hardened by being passed between heavy rollers, which iron it out smooth. The leather intended for shoe tops is split by a machine, and rubbed with oil or tallow.

Shoes are made in great factories. The greatest shoe city in the world is Brockton, Mass. The uppers, soles and heels are first cut out by a pattern, by machinery. Then girls stitch the different parts of the uppers on sewing machines. Then the soles are sewed to the uppers by machines, and the heels are nailed on by another machine, that uses nails



African Zulus Scraping a Hide in the Process of Tanning It

cut from steel wire and driven into the heels at the same time. A pair of shoes can be made in less than half an hour. Most of the cutting is done by

QUESTIONS ON CLOTHES

Cotton:

1. *Where and by whom, was cotton first seen by a European? How long ago was that?*
2. *To what common plant is the cotton related?*
3. *What two kinds of cotton are grown in this country? What state grows the most cotton?*
4. *How is the land prepared for planting cotton?*
5. *Describe the cultivation of cotton.*
6. *Where is the cotton found? What might have been its original use, in nature, before men learned how to use it?*
7. *How is cotton picked?*
8. *What is the cotton-gin? When and by whom was it invented? What does it do?*
9. *What effect did this invention have on the cotton industry?*
10. *What uses are made of the cotton seeds?*
11. *Describe the process of weaving.*
12. *In what cities in this country is most of our cotton cloth made? From what European countries do we get expensive cotton cloth?*

Wool:

1. *What is wool? In what part of this country is most of it produced?*
2. *Describe the process of preparing wool for spinning.*
3. *How is the cloth treated after it is woven?*
4. *What is meant by "felting?" What is the use of this?*

Skins:

1. *What distinction is sometimes made between hides and pelts? Name some of each kind.*
2. *What was the Hudson Bay Company?*
3. *Where was Astoria? When and by whom was it founded?*
4. *How are skins prepared for use?*
5. *How did the Indians do this?*
6. *What effect has the leather business had upon our forests?*
7. *Describe the factory process of making shoes.*
8. *How many different uses of leather can you mention?*

This is a good place to call the attention of the children to their own clothes and the material of which they are made—cotton, wool, etc.; what kind of leather in their shoes and from what animal it was taken.

men, but the sewing-machines are operated by women. One woman can sew from seven to eight hundred pairs of shoes in a day. Leather can be treated until it is water-proof. It is then used for carriage and automobile tops. This country leads the world in the manufacture and export of leather, boots and shoes, and leather goods.

COAL

To understand about coal, we must go back in mind to the days when the earth was young, to the time already described when the rocks were being formed under the ocean from the dirt washed down by the water.

As soon as there was soil, plants began to grow. To say where the first seeds came from is impossible. There were neither animals nor men on the earth in those days. There grew then great ferns, and trees of immense height, and for centuries they flourished and died, and built up deep layers of humus soil. Then there came a day when the land was plunged beneath the ocean, by one of the *wrinklings* due to its cooling and shrinking. The deep layer of humus soil was covered up by the soil brought down by the water. As this soil hardened into rock under water pressure, the humus was slowly pressed too, into a firm, hard, black, rock-like substance. Then there came a day when another twist of the shrinking earth-crust lifted these rocks once more above the ocean. The rocks were covered with soil, and once more the great trees flourished. Then again the deep layer of humus, again the ocean plunge, and the hardening into rock. This series of changes took place several times over. The hardened humus we call coal. We find coal between layers of fine-grained rock, which we call shale, or slate, and the number of layers indicate the number of times that the territory was submerged during the coal-making period. Each layer of coal is called a seam, or a *vein.* The coal veins vary in thickness from a few inches to thirty or more feet. In some places the veins are level, and the coal can be dug out very easily. Elsewhere the beds lie slanting in the earth. They are said to *dip.* In many places the beds appear at the surface. That is called an *outcrop.* In other places the miners must go down as far as fifteen hundred feet to find the coal.

The hardest coal is called anthracite, and is found principally in Eastern Pennsylvania. The soft coal, which is called bituminous coal, is found in western Pennsylvania, Illinois, West Virginia, Ohio, Alabama, and in many other States of our country.

There are different ways of mining coal, according to the manner in which it lies. Surface coal is mined by uncovering the beds and digging it out of the hole, in some such manner as stone is quarried. This is called *stripping.* Veins of coal lying near the surface are called *drifts.* If the coal outcrops above a valley or stream, all that needs to be done is to drive in a tunnel and drag out the coal in baskets or wagons. Mule cars on little tracks are largely used for this kind of mining. Where the coal slants or "slopes," or where it lies deep under ground, the only way to get at it is to sink a shaft down to it, and then drive tunnels to follow the veins. Most coal is mined in this fashion.

A shaft is like a deep well, usually twelve feet by thirty, with the sides braced with heavy timbers. This is divided into compartments, with elevator shafts, to take the men and mules and cars in and out of the mine, with ventilating shafts, and pipes for pumping water from the mine. There is always water in a deep mine. The water that sinks down into the earth, you will remember, goes down through the crevices in the rocks to make under-ground streams and pools. Therefore, when those rocks are cut across, the water drips into the various tunnels or cuttings, and in time would flood the mine if it were not pumped out. In the same way, the air of the mine would become foul and unfit to breathe if it were not constantly renewed. Carbonic acid gas is found in great quantities in deep mine shafts and tunnels, and men could not work without a constant supply of fresh air. This gas is heavy and lies near the floor of the tunnel.

The main entry from the bottom of the shaft is called the gangway. That is extended, side entries are dug, and from the side entries passages are cut at right angles, running parallel with the main entry.

Blocks or pillars of coal are left standing to hold up the roof, but as these would by no means support the great weight of rock, the miners put up hardwood posts to support the roof. In spite of the care that is taken, however, not a year passes that men are not killed or injured by falling slate and rock. Another danger is from gases. The carbonic acid gas, already mentioned, is called "choke-damp." In mining the coal explosive gases, called by the miners "fire-damp," are liberated. Unless good ventilation is maintained in the mine, these collect near the roof and cannot be easily detected, but miners coming along with little lighted torch-lamps in their caps may set this gas afire. The result may be an explosion that will sweep the length of the mine. To protect against this, safety lamps are used in many mines. Modern mines are lighted by electricity. Fires often result from explosions, and men have been trapped in distant cuttings by fires which they could not pass through. The "choke-damp" which comes after a fire in a mine, is nothing but the carbonic acid gas produced by the using up of the oxygen by the flames. The miner who escapes the explosion and the fire may live to be suffocated by the carbonic acid gas. Add to all these the danger from flooding of the mine, and we may appreciate the dangers that have to be faced by the men who dig our coal.

Coal is loosened in the vein in one of three ways. On surface drifts, or outcrops, the pick and shovel are used. Under ground, in anthracite, the coal is usually blasted. Holes are drilled into the face of the heading, powder or dynamite is placed in it, and the charge exploded by a fuse or electric spark. The coal that falls down is shoveled into cars and sent up, and another "shot" is prepared. There are two dangers in this method. First, that the roof will cave in under the explosion. Second, that the explosion will set fire to the "fire damp." Machines that are run by compressed air or electricity are now largely used for this work. They cut the coal into huge blocks as easily as one would cut bread with a knife.

After the coal has been loosened, it is taken in little cars to the bottom of the shaft, and lifted to the surface. These cars are usually drawn by mules, though some mines now have electric cars for the purpose. Anthracite coal is then sent to a crushing machine, or "breaker." There it is crushed, and sent through a trough beside which sit boys to pick out pieces of stone that may have gotten mixed with the coal. It is then passed over various screens, which sort it into uniform sizes. These sizes are called lump, egg, chestnut and pea coal.

The soft coal, besides being used for factory boilers and locomotives, is largely used in making coke. Soft coal is burned slowly in a large, cone-shaped brick oven, for two days or longer. When it is sufficiently burned, water is turned in to cool it off, and the coke is removed. Most coke is used in iron and steel mills. It is also used by blacksmiths, and in locomotives. Illuminating gas is one of the by-products given off in the process of making coke.

A Coal Breaker

The lumps of anthracite coal are lifted to the top of the building and crushed. Then they run down the trough to the screens. Coal is often loaded direct from the breaker to the car.

IRON

It has been suggested that the first iron workers were savages who innocently built a fire on a rock containing iron ore. When the fire went out, they found that the partly melted rock could be pounded into better shaped tools and weapons than those made from stone. It is perfectly certain that the use of iron is very ancient, and that there is no savage tribe, living in a country containing iron ore, which has not long since solved the problem of its use. The same may be said of copper and tin, and of the alloy bronze which is made from them.

It is probable that the first savages merely built a fire on the iron rock. Later they broke the ore into chunks, and piled it high with wood, placing it between high rocks so as to create a draught. Later it was discovered that if limestone was put into the pile, the impurities would stick to the limestone and form a scum which could be taken off, leaving the pure iron. Finally, some one built a chimney over his pile of ore, and the furnace was invented. That was the primitive method. Today iron is mined, like coal, and in enormous quantities; for in this country, so full of railroads and machinery, almost everything in sight is either made of iron, or has iron in some part of it. The richest iron ore in this country comes from Minnesota and Michigan. Alabama, Virginia, Tennessee and Pennsylvania are next in importance.

Iron is never found in the earth in a pure state, as gold and copper often are. Always it is combined with sand, gravel or rock into a compound which is called an ore. The value of the ore depends on the amount of iron that may be gotten out of it. Iron is mined much as coal is; there are drifts, slopes and shafts. Surface ores are scooped up with a steam shovel and loaded on flat cars, or into ore ships. When it is deep lying, it is blasted out in the same manner as coal. Since the iron and coal, and the limestone which is used in reducing the ore and separating the true iron are all very heavy, the "smelters" or furnaces for reducing or smelting the ore are located as near the center of convenience as possible. The most convenient place seems to be near the great coal fields of Pennsylvania. The iron ores from Michigan and Minnesota are brought down the Great Lakes

from Duluth to Cleveland, in specially constructed ore ships, and from Cleveland sent to Pittsburgh by rail. Pittsburgh is a center of rail and water transportation. Another center is Bethlehem, Pennsylvania, near the Delaware River.

The ore is smelted in a blast furnace. This is a huge steel cylinder, eighty feet or more tall, lined with fire brick. The bottom of the cylinder is a tank called the hearth. The top is called the stack. The furnace is "charged" from the top with alternate layers of coke, limestone and iron ore. The fire is lighted, and kept burning by a hot air blast introduced through pipes just above the hearth. As the mass melts, it sinks from the stack down to the hearth. The iron runs to the bottom, and the cinders and other impurities which are called slag, rise to the top and are removed through a door above the hearth.

The iron leaves the furnace as a red hot stream of liquid metal. This stream flows through ditches in the earthen floor, and into little molds that are made of sand. Here it cools. The cooled lumps or ingots are called pig iron, or cast iron. The ingots, or "pigs," are perhaps two feet long and six inches through. They may be seen outside a smelter stacked up in long rows like cord-wood, waiting to be shipped to foundries and steel mills. Pig iron is the first step in the process of making iron. It is hard but brittle. It can neither be bent, hammered nor tempered. It must be refined and made over into malleable or wrought iron, before it is good for much. The slag was formerly wasted, but at present several uses have been found for it, principally railway ballast, and in cement making.

By remelting the pig iron, and stirring thoroughly to expel the impurities which have been turned into a gas by the heat, the molten mass becomes a porous cake, composed of pure iron and slag. This is broken up into balls, and the slag squeezed out of it. The result is malleable iron. Iron in this condition can be heated and bent or hammered into different forms. It is not brittle as is cast iron, and is therefore valuable for commercial purposes. It is not yet hard enough to be ground to a fine cutting edge, and tools made of it soon wear off and become dull. It must be once more refined, and made into steel.

Steel was known to the ancients almost as soon as they had learned to smelt iron. But it was always made in small quantities, and its use was restricted to knives, razors, and weapons—swords and spears. In this country, steel is manufactured in enormous quantities for cannon and for war-ship plating, as well as for use in manufactures. There are several methods in use for making steel, according to the end desired. The most common method in this country consists in placing powdered charcoal and crude bar iron in an air-tight crucible, and melting them. The heat drives off the silicon and manganese which are present as impurities, and the iron in the molten state absorbs easily the pure carbon of the charcoal, which is always very carefully proportioned. This process results in a high class steel, which is used in making watch springs and edged tools.

QUESTIONS ON COAL AND IRON

COAL

1. *Describe the steps in the formation of coal.*
2. *What is a coal vein? How is it located?*
3. *Define dip; outcrop.*
4. *What other names are given to hard and soft coal? Give the principal localities where each kind is found.*
5. *How is surface coal mined? What is a drift? How is it mined?*
6. *What is a shaft? How is it divided?*
7. *Why is there always water in a deep mine?*
8. *What is carbonic acid called, when found in mines? Why is it dangerous?*
9. *Why is there danger of fire in deep mines? What is a "safety lamp?"*
10. *Name three ways by which coal is loosened in the vein.*
11. *What dangers are there in blasting?*
12. *How can those dangers be avoided?*
13. *What is a coal "breaker?" How is coal sorted into uniform sizes after being crushed?*
14. *What uses has soft coal? What is coke? What valuable by-product has coke?*

IRON

1. *What story explains the discovery of iron?*
2. *How did the early savages extract the iron?*
3. *Name six states which produce iron ore.*
4. *In what form is iron found in the earth?*
5. *By what method is iron mined?*
6. *In reducing iron ore, what two substances are placed with the ore? State the use of each.*
7. *Describe the blast furnace for smelting iron.*
8. *Why is coke used in smelting instead of coal?*
9. *How is the molten iron run into molds? What are these lumps of iron called?*
10. *What are the qualities of iron in this form?*
11. *How is malleable iron made? For what is it used?*
12. *What is "slag?" What uses has it?*
13. *What two cities in Pennsylvania are centers of the coal and iron industries?*
14. *What is steel? What use did ancient peoples make of it?*
15. *Describe the most common method used in this country for making steel. What objects, principally, are made from this kind of steel?*

How to Give a Party

By ELLYE HOWELL GLOVER, Author of "The Dame Curtsey Books" and "The Art of Entertaining."

Entertaining Young People

CHILDREN are the most charming and delightful guests, so appreciative, so free from criticism, that it is a joy to plan a party for them. There are three essentials that make for success in an affair when the ages are under thirteen: short hours, simple refreshments, and plenty to do every moment of the time. Of course, a party means labor and forethought on the part of the mother, but nothing repays so bountifully. Children look back and recall incidents that took place at such and such a birthday celebration, so we must remember that in order to insure these happy recollections parties must begin at a very early age. One painstaking mother keeps a record in a prettily bound red leather book of her daughter's birthday parties, from the first year, having snap-shots of the cake with its one lone candle and the wee guests in high chairs around the table, up to the twelfth year. The names of the guests and the gifts received, the menu and the daughter's place card were recorded every year.

Invitations may be written like this:

> Mary Brown will be pleased to have you come to her party on Monday, September the tenth, from three to half after five.

This should be addressed to the recipient, and mailed or delivered personally.

The stationery that comes prepared just for parties, ready to have names and dates written in, is much in favor, as it seems to please the wee folk by its "partified" appearance, being decorated with diminutive figures. One of these reads like this:

> You are invited to my party to be given at my home on ——— at (*name of hostess*). Please let me know.

When two children are to entertain together, here is a good formula to use:

> We are having a party on ——— and shall be so delighted if you will come. Please write and tell us we may expect you from ——— o'clock until ———.
>
> Mary and Harriet Jones.

When the children are almost grown up, and that means almost into their teens, it is a good plan to write an invitation in this way:

> Mrs. George Graham
> Charles and Jane Graham
> At Home
> Saturday, June tenth
> from four to six
> Please reply Dancing

Until boys and girls are twelve or thirteen, all parties should be in the daytime; exceptions may be made in vacation and during the holiday season, but it would be much better for growing lads and lassies if mothers would adhere strictly to this rule.

When an invitation is received the little boy or girl should be impressed with the responsibility of replying at once, either accepting or regretting, the mother explaining how important this is. Courtesy and punctuality must be taught from the very beginning of a child's social career. Practice how to enter a room, and how to find and greet the hostess; also how to leave, saying, "I have had a very nice time," or, "Thank you for asking me, I have had a lovely time." These lessons are learned best by acting them out, rehearsing, as it were.

A mother whose children are noted for their perfect manners says that this "trying a part out beforehand" is the surest way to instill the lesson; so before the party comes off she says, "Now, Rose, let's make believe you have just reached Johnny's house. Let me see you come in. I'll be Johnny's mother." Rose enters, says "How do you do?" to Johnny and his mother, and then leaves, "making her manners" under her mother's criticism. When this same Rose is older grown she will never have to stop to think, or rather she will never forget, to be polite and courteous; her manners have then become a habit, and she is always at ease.

Half the fun at a party is taking something home, especially from the table, and the wise mother does not forget this, but has dainty bags of crepe paper, or a supply of paper napkins, so that a sample of cake, a few pieces of candy and the

favors may be carried away. Charming caps, aprons, and even muffs and boas, may be made of tissue paper at trifling expense and with very little work, and the children are happy to dress up in them and then be told to take them home.

Soldier caps for the boys, of one color, with aprons to match for the girls, make a good way to choose partners for the march that leads to the dining-room, or for any game the hostess may have planned.

At a birthday party, the cake with its candles is the *piece de resistance*, each child being asked to blow and make a wish for the honored guest. It is a pretty idea to make a small cake for each guest, placing a candle on each one. These cakes are put on one round plate, making the appearance of a large cake, and it is a surprise to tell the children to "take one." Angel food or sunshine cake are the best for children as there will be no unpleasant after-effects from these. Never use a layer cake recipe, as it is too soft and gets fingers and clothes sticky. Peppermint bonbons or some of the hard candies should be provided, never chocolates. Serve a plain vanilla ice cream in ramekins with a flower placed on the underlying plate. In cool weather cocoa with a marshmallow in each cup is the best beverage, and in summer nothing takes the place of lemonade. Sandwiches of chicken or jelly are acceptable but never give small children anything rich or what they would not be likely to have at home. Use alphabet crackers to spell the name at each plate. Animal crackers and graham wafers are always acceptable and filling. Delectable "cakes" are made by sticking lady fingers together with frosting. Vanilla wafers may be done in the same way; also the long crackers (Saratoga flakes). These variations make attractive plates and are really harmless, though the children think them wonderful. Children dearly love to be passed many things and urged to "have another one," it all seems so grown-up.

Refreshment tables may be arranged very cleverly if any special day is to be observed, as favors and decorations may be obtained for Easter, Christmas, St. Valentine's, Washington's Birthday, St. Patrick's Day and Fourth of July.

Children are fond of balloons, and they may be featured to make an unusual decorative scheme and provide a favor to take home. Tie a red one on the back of the chair to be occupied by a boy and a blue one for a girl, then anchor a bunch of them to the lighting fixture over the table; for accidents will happen and it is well to have this reserve supply. When the youngsters depart, tie the balloons to the wrists to insure safety in getting home with them.

When the balloon feature is employed, play as many games as possible with balls, thus carrying out the idea. Human tenpins may be arranged, by standing the boys up as if they were tenpins; then one girl at a time rolls a large rubber ball, the one hit going down. Score is kept as for the real game. Ping-pong, battledore and shuttlecock, parlor croquet (if not seasonable for the outdoor set) and soap bubbles may be used at this "ball" party.

When a small child was asked what made a good party, the reply was "something doing every minute and ice cream and cake." With this reply in mind, there should be action at a children's party from start to finish. It is well to have several assistants to start things and see that every child has an opportunity to take part in whatever is going on. If there is a great difference in ages, as may be the case when two children entertain at the same time, the little ones should be in groups with games suited to them, such as "Ring around the Rosy," "Drop the Handkerchief," "Pussy Wants a Corner," "Going to Jerusalem," "Button, Button, Who's Got the Button," "Hide the Thimble" and "Blind Man's Buff." As yet no games have ever taken the place of these old-time favorites.

Children from eight to twelve delight in guessing contests like the following:

NAMES OF NUTS

1. Letter of the alphabet and a receptacle.
2. A country in South America.
3. Part of a building.
4. A stout wood.
5. A color.
6. Two boys' names.
7. A vegetable.
8. Found by the sea.

Answers—

1. Pecan	5. Hazel
2. Brazil	6. Filbert
3. Walnut	7. Peanut
4. Hickory	8. Beechnut

Give a box of salted nuts for a prize.

These "Rhyming Verses" may be used with success. In each of the jingles there is something to be guessed that is described, either an animal, a fish, a piece of furniture or a flower. Of course there is the customary prize for the one guessing the most or the fewest. The answer is given at the end of each verse.

RHYMING VERSES

I

Although he has a splendid back,
He hasn't any head;
And though his arms are very strong,
He never has been fed.
His legs are stout, yet never have
I seen him run and play;
You sit upon his lap I think
For hours every day. (*Chair.*)

II

This body likes to climb a tree,
Tho' she's but two years old;
She walks the top rail of a fence,
Was ever child so bold?

Her voice is loud, she sings at night,
  She never wears a hat;
Now say the name of anything,
  Her name will rhyme with *that.* (*Cat.*)

III

He uses a pen
  Every day of his life,
And yet he can't write,
  And no more can his wife.
Like the lily, he never
  Will labor or toil,
And oft like the lily
  He roots in the soil. (*Pig.*)

IV

'Tis a gay sort of lion,
  All dressed up in yellow;
I've pulled the head off
  Of many a fellow.
He stands in the grass,
  But he never prowls 'round;
When I blow off his hair
  He makes never a sound. (*Dandelion.*)

V

Tho' it stays by the house,
  Yet it leaves in the spring;
Tho' I know well its bark,
  I don't think it can sing. (*Tree.*)

VI

He likes his bath so very well
  He eats his dinner in it.
I say, "Come out and take a walk,"
  He won't come for a minute.
I dropped a line to him one day
  Inviting him to travel,
And when he came he couldn't walk,
  But laid upon the gravel. (*Fish.*)

In "The Art Gallery," the objects representing the subjects are to be placed around the room or on a table, catalogues being passed with pencils:

THE ART GALLERY

Subjects	*Objects*
1. Out for the Night	Candle in candlestick
2. Departed Days	Last year's calendar
3. Scene in Bermuda	Onions
4. We Part to Meet Again	Scissors
5. The Reigning Favorite	Umbrella
6. Home of Burns	Flatiron
7. The Greatest Bet Ever Made	Alphabet
8. Cole's Memorials of the Great	Cinders
9. The Four Seasons	Mustard, vinegar, salt and pepper
10. A Morning Call	A bell
11. Assorted Liquors	Whip, switch and slipper
12. The Skipper's Home	Cheese
13. An Absorbing Subject	Blotting pad
14. A Dancing Entertainment	A ball
15. Bound to Shine	Bottle of shoe blacking

Two other games some young folks will enjoy are the "Bird Contest" and "Animal Twists." In the latter write the hieroglyphics on cards to which small pencils are attached. The letters when properly transposed will be the names of animals:

ANIMAL TWISTS

1. Shore	2. Soon gome	3. Tassy cup	4. Areb
5. Kendoy	6. Sinob	7. Kats Rum	8. Chowdouck
9. Padrole	10. Allam	11. Talligora	12. Hungry Doe
13. Present	14. Fullborg	15. Kacopec	16. Gip
17. Ebar	18. Act	19. Somue	20. Somsoup

Key to Animal Twists—

1. Horse	2. Mongoose	3. Pussy-cat	4. Bear
5. Donkey	6. Bison	7. Muskrat	8. Woodchuck
9. Leopard	10. Llama	11. Alligator	12. Greyhound
13. Serpent	14. Bull dog	15. Peacock	16. Pig
17. Bear	18. Cat	19. Mouse	20. Opossum

BIRD CONTEST

What bird—

1. Is on a coin of the United States? (*Eagle.*)
2. Is an awkward clown? (*Jay.*)
3. Is untruthful? (*Lyre.*)
4. Represents future bliss? (*Paradise.*)
5. Is timid and shrinking? (*Quail.*)
6. Brought fame to a poet? (*Raven.*)
7. Is a mimic? (*Mocking.*)
8. Is one of the canonical hours? (*Vesper.*)
9. Was an early explorer? (*Drake.*)
10. Is a stormy sea after dark? (*Nightingale.*)
11. Is a sovereign? (*King.*)
12. Is frozen vapor? (*Snow.*)
13. Is essential to the dress of man? (*Tailor.*)
14. Is a woman's name. (*Phoebe.*)
15. Is a pseudonym for contempt? (*Cuckoo.*)
16. Is a church dignitary? (*Cardinal.*)
17. Is frolicsome? (*Lark.*)
18. Is a household pet? (*Cat.*)
19. Is melancholy? (*Blue.*)
20. Is a rascal? (*Loon.*)
21. Is a Quaker lady? (*Dove.*)
22. Is cruel? (*Butcher.*)
23. Follows the harvest? (*Thresher.*)
24. Is an Eolian harp? (*Humming.*)
25. Is a member of the D. A. R.? (*Regent.*)

In strawberry season the following is an appropriate contest, with individual strawberry shortcakes for refreshments, or strawberry ice cream ornamented with a big berry on top of each cone of cream:

BERRY CONTEST

1. What berry is a favorite flavoring? (*Wintergreen berry.*)
2. What berry is red when it's green? (*Blackberry.*)
3. What berry is much used for a fabric, much loved by ladies? (*Mulberry.*)
4. What berry was made famous by Mark Twain? (*Huckleberry.*)
5. What berry is found on the grass? (*Dewberry.*)
6. What is the most irritating berry? (*Raspberry.*)
7. What berry is used in stables? (*Strawberry.*)
8. What is the berry always in evidence at a great winter festival? (*Hollyberry.*)
9. What is the oldest of all berries? (*Elderberry.*)
10. What berry always comes with the king of birds? (*Cranberry.*)
11. What is the most melancholy berry? (*Blueberry.*)
12. What berry is an indentation on the coast? (*Bayberry.*)
13. What berry is often used in a favorite game? (*Checkerberry.*)
14. What berry is a help in making things clean? (*Soapberry.*)
15. What berry is nearly always found with the arbutus? (*Squawberry.*)
16. What berry is a dunce? (*Gooseberry.*)

When the following pastime is used serve the ice cream in tiny flower-pots, grate chocolate over the top to look like earth, and plant any flower in season in the top; place the pot on a plate.

FLOWER RIDDLES

1. What did the bull do in the old woman's china-shop? (*Buttercups.*)
2. What did the man on the ice do to his nose? (*Bluet.*)
3. What facial characteristics have we all? (*Tulips.*)
4. What do unmarried men lose? (*Bachelor buttons.*)
5. What followed the tax on tea? (*Tea-rose.*)
6. What is a popular girl who can't go to a ball? (*Blue-bell.*)
7. What is an unpopular one who does go? (*Wall-flower.*)
8. When you buy an alarm clock, what do you ask for? (*Four-o'clock.*)
9. What are firecrackers? (*Poppy.*)
10. What are they mostly connected with? (*Cat-tails.*)
11. Old-fashioned flowers are planted in what? (*Prim-rows.*)
12. When a bashful young man is calling, conversation is apt to do what? (*Flag.*)
13. What are stage houses made of? (*Shamrock.*)
14. What is often impressed upon little boys? (*Lady's slipper.*)

For a tenth birthday party here is a novel suggestion. For the table center piece have a bowl filled with water containing twenty goldfish; have just ten guests; at each plate have a small fish-bowl filled with fancy bon-bons, the bowls to be filled with water when the children go home taking the fish with them. During the afternoon they take part in "A Fishy Contest" which carries a prize of a game of fish to be caught with a magnet pole.

A FISHY CONTEST

What fish is—

1. A shade of pink? (*Salmon.*)
2. The name of a country road? (*Pike.*)
3. Part of a soldier's equipment? (*Sword.*)
4. An animal associated with old maids? (*Cat.*)
5. Part of the solar system? (*Sun.*)
6. To ridicule or make light of? (*Carp.*)
7. The opposite of strong? (*Weak.*)
8. A favorite Scotch fish often salted? (*Herring.*)
9. Collect on delivery? (*Cod.*)
10. The favorite color of many people? (*Blue.*)
11. The name of a northern lake? (*Trout.*)
12. Part of a bird's cage.? (*Perch.*)
13. A name to beware of? (*Shark.*)

Another game, "The Minister's Cat," is just as much fun as the children make it; all depends upon how fast they can think and how long they can make one letter last.

One begins by saying: "The minister's cat is ambitious." The next states, "The minister's cat is anxious," and so on until all the A's are exhausted, then the next letter is taken up.

It is very much like the old game beginning, "I love my love with an 'A,'" and some one says "apple," and then "B" is taken up, and so on down the alphabet, or until the players are tired.

As most children take music lessons a contest which treats of the expressions in common use may be helpful as well as interesting, and candy boxes may be found in the shape of many musical instruments which may be awarded for prizes, or a new piano selection of sheet music would be acceptable if the pastime is used by a teacher at a class party:

TERMS USED IN MUSIC

1. A vegetable.....(*Beat.*)
2. Part of a ship.....(*Hold.*)
3. Found in some families.....(*Triplets.*)
4. What a weather-vane does .....(*Turn.*)
5. What tired people like to do .....(*Rest.*)
6. Due at the bank.....(*Notes.*)
7. Part of a door sometimes lost.....(*Key.*)
8. What a knife should be.....(*Sharp.*)
9. Part of a prison.....(*Bars.*)
10. Word applied to a good dresser.....(*Swell.*)
11. What a tight shoe does .....(*Presto.*)
12. Used in weighing.....(*Scales.*)
13. A month in the year.....(*March.*)
14. A black, sticky substance.....(*Pitch.*)
15. What a tailor does.....(*Measure.*)
16. Part of a man's attire .....(*Tie.*)
17. Mean and despicable.....(*Bass.*)
18. An apartment .....(*Flat.*)
19. A boy under age .....(*Minor.*)
20. A military officer.....(*Major.*)
21. Four times ten.....(*Forte.*)
22. What a huckster does .....(*Pedal.*)
23. Money paid as the result of wrongdoing .....(*Fine.*)

Many outdoor games are adaptable to inside use if the rooms are large, but even on quite cold days one or two games outside will be found enjoyable.

Did you ever watch a dozen youngsters on the beach in their bathing suits playing "Sandpiper?" Here are the rules of the game: The children, excepting two, turn themselves into a flock of sandpipers, hopping up and down the beach. Two are "hunters," who try to catch the bird crying:

> "Sandpiper, sandpiper, hopping on the sand,
> Come, let us catch you, and join our band."

The hunters catch the birds, who are at once turned into hunters. The only way a sandpiper can escape is to stand on one foot or hop away. So long as he uses only one leg the hunters cannot take him.

A good game for boys is that of "Drummer Boy." The girls like it, too. The players form in a circle an arm's length apart. The leader is in the middle with a basket-ball. He says, "Rah, rah, rah! Run, boys, run! You with the red coat follow the drum." As the word "drum" is said, the leader throws the ball at a boy in the circle. He must try to catch it, and if successful takes his place as leader. At the word "Run" all those in the circle take very short steps to the left and clap their hands in time like the beating of a drum. Of course, good, lively music adds to the charm of this game.

Children gladly welcome any new idea, especially when it is an outdoor pastime, so I may describe one loved by little Chinese girls and boys. It has been dubbed the "Chicken" game and most appropriately, I think. The requisites are as many rows of sticks of wood as there are players; kindling wood is just the right thing. Each row must have ten sticks placed within easy hopping distance apart.

Each player or "chicken" takes his or her posi-

Cutting the Birthday Cake

tion at the head of a line, and at the signal "Ready!" begins to hop over each stick with only one foot. It is not so easy as it sounds. When the row has been successfully "hopped" the last stick is removed, the return trip is begun, and at the end the last stick is kicked out of the line. Then the start back is made and the return made until there is but one stick of wood left in the line. The player who first reduces the line to one, wins the game. At a home party a prize could be offered to add interest to the game.

Here are two Scotch games that will interest children. The first is called "King-a-be-low," or, as it has become in this country, "Kangalo." The players form at one side of the lawn, and a player is chosen to be king. His duty is to stand in the middle, and when he calls "King-a-be-low, who shall come through?" the other players try to run by to the opposite side, while he endeavors to touch them on the head, or, as it is called, "crown" them. Those whom he succeeds in crowning remain with him to aid in crowning the rest.

The second game is "Cobs." This has been revised from an old-time game to which the youth in Argyleshire were devoted. A basket-ball is used and half of the players form a circle. The other half form in two ranks at one end of the circle. Those who are in the circle may take numbers or the names of flowers or animals. Those who are in the ranks take names or numbers corresponding to those in the circle. One player is stationed in the middle of the circle and throws the ball high in the air, calling the name or number of a player in the circle; the one called tries to catch the ball on the bound. If he fails he runs between the ranks and each one has a chance to hit or "cob" him on the back. He must remain in the ranks now and the one having the same name or number takes his place in the ring. If he catches the ball on the first bound, he throws it up quickly and calls another. The fun comes in playing as rapidly as possible.

"New Blind Man's Buff" is an exciting little game much loved by children, and just the thing for outdoors. Form a circle. In the middle place the blind man (a big silk handkerchief is fine for blinding). Give each player a number in rotation. The blind man calls out two numbers, like "4 and 7;" these children change places rapidly; in the rush the blind man tries to catch one; failing, he calls two more numbers; if again unsuccessful he calls "100," which means that all change places, and he usually gets a victim in the scramble. The blind man then takes the number of the one caught and the game proceeds.

After the family dinner on Thanksgiving, games and contests are often indulged in, especially by the young people. The following is a good contest for this occasion:

A THANKSGIVING DAY CONTEST

1. What part of the turkey is an animal? (*Hart.*)
2. What is the belle of Thanksgiving day? (*Dinner bell.*)
3. What foreign city is found in every turkey? (*Brest.*)
4. If a guest named Gray choose a leg for his portion what poem might be named? (*Gray's Elegy ; L. E. G.*)
5. When Dinah dropped the custard pie, what vegetable did it become? (*Squash.*)
6. What part of the feast would a printer dislike? (*Pi.*)
7. What food becomes a toilet article by the change of one letter? (*Soup ; soap.*)
8. What part of the turkey would a noisy boy prefer? (*Drumsticks.*)
9. What two letters do the children like Thanksgiving day? (*C-and-Y.*)
10. What dull-colored letter is found on the dinner table? (*Gravy ; gray V.*)

For a good-sized children's party the "Progressive Puzzle" idea may be used. The requirements for this party are children to make four at a table, as many tally cards and pencils as guests, a box of stars or a punch for markers, and two prizes—more if the hostess wishes.

Often enough puzzles may be borrowed or they may be bought. For very small children sliced animals and sliced birds will be popular. There should be as many puzzles as children. Sometimes the puzzles are given as prizes. All these arrangements each individual hostess must decide for herself. The tally cards may be made at home from colored cardboard cut in the shape of an interrogation mark. Number each one at the top and place corresponding numbers on the puzzles. For instance, the players who have Nos. 1, 2, 3, 4 will take puzzles marked 1, 2, 3, 4, and go to the head table, which will be marked No. 1. Those who draw 5, 6, 7, 8 will take puzzles marked the same and go to table No. 2. When a player finishes at the head table a bell is rung and each child moves a number ahead; then every player who has solved his or her puzzle has his card punched or a star affixed. The hostess must use her own judgment as to how long the progressions shall last, as the secret of success in any party is not to let the guests become weary; stop while they want to go on. This party is best suited for children from eight to twelve.

A HALLOWEEN PARTY

Perhaps no season is more popular for parties than Halloween. Children love mystery, and as time goes on there are always young people for whom it may be a first time to celebrate this fascinating special day. Witches, bats, owls and black pussy cats, with jack o' lanterns of all sizes, are the accessories one must have, and our Irish friends include the fairies, brownies and all the wee folk who live and delve in the underground world.

First of all, there must be an invitation that will tell what the party is to be, and to add to the fun have these mysterious messages delivered by a little "brownie" carrying a witch's lantern ("jack o' lantern").

This invitation may be written upon a narrow strip of paper and inclosed in an English walnut shell from which the meat has been removed. Glue the edges together, leaving an end of red and yellow baby ribbon outside to which is attached a wee envelope with the address upon it. On the card inside write:

Crack the nut and a message you'll find,
Which answer at once and you'll be kind.

To save space this invitation may be written on the typewriter:

I am going to have a party,
On Halloween night at eight,
The witches and ghosts are coming,
So be sure and not come late.

Marjorie King.

If the hostess wishes, she may telephone all the girls and ask them to come dressed as ghosts and tell them to come fifteen minutes before the hour set. The one who opens the door may be dressed as a witch, in red cape, black skirt and tall black hat with a red band. Sew black paper cats, owls, bats and lizards on the cape and ornament the hat with the very realistic spiders that are made of wire and for sale at the favor counter. After the boys come—and they may wear brownie and hobgoblin costumes if they like—ask them into the living-room and let the ghosts file in one by one. No one must speak a word except the hostess, who will ask them to form for the Virginia reel, which they must do silently. If by a laugh or familiar gesture a boy guesses who a girl is, and correctly, she removes her ghost costume.

Half the joy in a Halloween party is one's partner, but one must be content with the lassie provided by the fates. Here are some good ways to pair off. You can have some "serpentine," to be purchased at a novelty house or at the favor counter, or use different colored ribbons, or even strings will do. Seat the boys on one side of a door that has a transom and the girls upon the other. If the boys kneel it is better. Then at a given signal each maid throws her end of the ribbon over the transom, holding tight to the end in her hand. The boys are to catch and hold the first end they touch, the door will be opened and mates found.

Matching the glove is another good way to make fun and find partners for supper or at any game the hostess may have in mind. Let each girl put on her right glove, placing the left in a basket. When all the gloves are deposited a ghost or cupid or fairy, as the hostess plans, passes the basket to

the boys, who take one and go in search of the mate.

Try playing "Going to Jerusalem" to seat the guests at the dining-room table or in the room where refreshments are to be served. Have one chair less than guests. When the music stops seats are rushed for; when all but one are seated the hostess places that chair and partners are found in this "hit or miss" fashion, causing no end of merriment.

Sometimes partners are found by mating according to size or by matching initials of names, either first or last. Anything with the element of mystery in it works out, and on this night no one can afford to show any preference, but must enter into the spirit of the occasion.

A pretty and novel way to decorate the table for Halloween and at the same time carry out the Jack Horner pie idea, is to get a toy cart and pile in the favors or "good luck" symbols to be distributed and cover deeply with brown tissue paper hay. At each plate have a tiny toy pitchfork with which to dig out the gifts. Brownie figures may be on the cart, and small black cats harnessed to the cart. Brownie figures scattered over the table look quaint. Those made at home are just as good as store ones.

"Nut-toss" is a good game and requires considerable skill. Hollow out a large pumpkin and place it on the floor about ten feet away from a good-sized yellow earthen bowl containing peanuts and hazel nuts. Hand the player a tablespoon and give him five trials to see how many nuts he can pitch into the pumpkin. A list is kept of the names of the players and the number of nuts gotten into the pumpkin. At the end of the contest the one who has put the most in receives a prize. At one party where this was done the winner of the first and second prizes each received a red and blue ribbon, which was ornamented with all sorts of Halloween favor pins that stick on, like pumpkin heads, bats, black cats, etc.

No fortune-telling games would be complete without roasting chestnuts by the fire. Lacking a fireplace, put a cover over the gas burner of the kitchen stove and watch results when three chestnuts are placed on it. Name one a boy and the two others girls. If the boy and girl jump toward each other, all well and good, but if the girls approach each other, they will be rivals in the boy's affections.

Games played on Halloween usually have some bearing upon the future, so hostesses are privileged to add a touch of mystery even to commonplace pastimes. An amusing "stunt" is to provide each guest with a pair of scissors and a roll of paper about an inch wide, such as comes in a bolt of ribbon, if the regular "serpentine" is not procurable. Appoint a timekeeper and make two minutes and thirty seconds count for ten years of time. The time it takes to cut down the middle of the paper and roll the halves into a neat roll will determine the age of life at which one will marry.

Take twelve beans and quite a narrow-necked bottle. The one who can hold a bean at a time at arm's length and drop into the bottle from a foot above the bottle in the shortest time will show the steadiest nerve.

Fill a small tub with water; provide each guest with a long hat-pin. Have in the tub tight rolls of white paper for the girls and pink for the boys on which are fortunes (just short sentences); tie good and fast. The trick is to stab a roll with a hat pin. When successful the roll is to be untied and read aloud.

At one party the hostess announced "Yarns by the boys," and they immediately prepared to make a hasty exit. Then the hostess produced skeins of different colored worsteds and announced a prize for the couple who had the best ball in the shortest time, the boys to wind, unassisted by the girls, who were to hold the skeins. While performing this pretty task a flashlight was taken of the party.

AN EASTER PARTY

At an Easter party a Jack Horner pie may be the centerpiece, each ribbon radiating from it having a tiny chick on the end. These chicks may be purchased in quantity, and instead of hiding eggs for the "hunt" the hostess hides these fluffy little chicks. Inside the pie have Easter novelty candy boxes filled with the tiniest of candy eggs.

Egg-shaped ice cream, cookies in the shape of rabbits with currants for eyes and little nests filled with candy eggs make delicious refreshments. For favors have hats of tissue paper for the girls and soldier caps for the boys. Regular cocked hats, with long, white tissue paper feathers may be the parting gifts.

A pretty and exciting way to find partners either for refreshment or for games is to hide colored candy eggs throughout the rooms, two of each color; those finding two pinks or two yellows are partners. If desired real colored eggs may be used.

In large cities the stores are replete with all kinds of symbolic favors for Easter, and duplicates may be hidden or placed in a grab bag and the guests allowed one "grab." Chickens, rabbits, lilies, eggs, nests, all may be used.

A SPRING PAPER CHASE

This is a jolly outdoor sport for a bright, warm day and may be arranged for after school or a Saturday. Children from the ages eight or nine up to thirteen or fourteen may be invited. Outing clothes and stout shoes must be the costumes, and it is a wise thing to ask each child to bring an extra pair of stockings and a pair of slippers to put on when they return from the chase, for there is no telling what may happen, and shoes will be sure to be more or less muddy.

The "meet" should be on the lawn at the hour appointed, and only one hare will be necessary for a small party, say twelve; if there are twenty guests there should be two. If just one is sufficient it should be a boy; if two, choose a boy and a girl. It will probably be best for the mother or whoever acts as hostess to assign the parts of hares, and they should be well acquainted with the country for several miles around; then there must be one of the older boys for "whipper-in;" he belongs with the hounds. One of the smaller lads may be the huntsman and have a loud horn.

The hare has a sack (a stout clothespin bag or a pillow-case will do), with a cord to go over the shoulder. Fill the sack with well-torn newspaper or white paper with which to make the trail.

All being in readiness, the hostess produces her watch and at a word the hare is off; he has a ten or fifteen minute start. No one knows what he will do or where he will go, but he must leave the paper trail. At a given signal the hounds are off, and the only rule is that every one must be back at a certain hour, the hare included, whether he has been caught or not. Boys and girls love this kind of a party, and it is truly very exciting when the hare is seen and the hunter blows the horn. If a "killing" is made the hounds are jubilant, and all troop back to the house ready to do full justice to the "hunt tea" (or luncheon). Red is an appropriate color scheme and simple refreshments should be served.

A DAISY PARTY

The daisy is procurable nearly all the year round, either wild, cultivated or from the florist, and children love it, so with this in mind the party described was given. At a paper novelty house large daisies were obtained having just eight petals. The children were given the yellow centers after the petals had been cut off and hidden through the rooms. The child who first found eight petals was given a tube of paste and told to paste them back onto the center. These daisies could be made at home easily, cutting the center from yellow cardboard and having the petals at least three inches long. Award a prize to the child who first gets the daisy completed. Then another good "stunt" is to have them make a daisy chain by giving each child a coarse needle and thread and a big bowl of daisy petals, to see who can make the longest chain in four minutes.

"Daisy in the Dell" is an enjoyable game, and is played by forming the children in a circle and having them join hands, then choose one as daisy picker, who runs around the outside of the ring, crying: "Daisy in the Dell. Daisy in the Dell, I don't pick you, I don't pick you, I do pick you."

The player whom the "picker" touches must try to run clear around the circle and back to his place before the daisy picker catches him. If successful he does not have to be "it," but if caught he takes the place of picker.

The refreshments may be made very attractive by having individual cakes with daisies on top made with marshmallow petals and yellow frosting centers. Stems and leaves are made from angelica. Place cards may have real daisies thrust through the corner of the cards. Serve ice cream in halves of oranges; pierce holes around the edge of the halves and insert a daisy in each opening. This makes a circle of daisies around the top and the effect is lovely. Orange gelatine capped with whipped cream may be used instead of ice cream.

SUGGESTIONS

Let the children assist in the interesting party preparations. There is much that they can do in making place cards, and caps and aprons from crepe paper. Kindergarten work may be utilized; the training a child receives in these wonderful preparatory schools does much to help little fingers to be clever. One mother gave a unique party, inasmuch as everything was of paper; only girls were invited and they cut and dressed paper dolls, and made paper napkins into articles. It was astonishing to see what was created,—caps, aprons, jackets, boats, pin wheels, mats, baskets. Everything was put on a table, a vote was taken as to the best article, and a prize of a set of cut-out pictures was given. A paper tablecloth, napkins, plates and candle-shades were used, with paper flowers for a centerpiece.

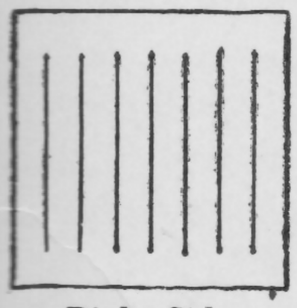
Plain Stitches in Needlework

By EDNA E. HOOD, Supervisor of Sewing in the Public Schools, Kenosha, Wis.

Lessons in Correct Sewing

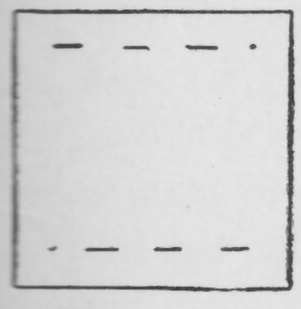
To Learn Warp and Woof Threads. Take a piece of cardboard seven inches square, one-half skein of red Germantown and one large darning needle. Measure from the top of the cardboard one inch and from the side of the cardboard one inch both at top and bottom. Place four dots at these places. Join the dots with lines. Along the top place dots one-half inch apart, and along the bottom place dots one-half inch apart. Join the dots lengthwise. Punch holes where the dots were placed.

Thread the needle with yarn one and one-half yards long. Begin to weave warp threads through the upper left-hand corner hole. On the upper side of the cardboard weave yarn lengthwise of card, on the wrong side of the card, across to next hole. Fasten the yarn on the wrong side. This finishes the warp threads.



Right Side

Thread needle with yarn one and one-half yards long. Begin to weave the woof threads (crosswise threads) just below the same hole that you began to weave the warp threads. Weave on the right side over one thread and under one. Weave across the card. Turn and weave back, going under one and over one. Be sure to take up the thread opposite to that which you took up before. This illustrates the woof threads. Weave one-half of the card. Let the child write the words "Warp Thread" along the lengthwise threads, and the words "Woof Thread" along the crosswise threads.



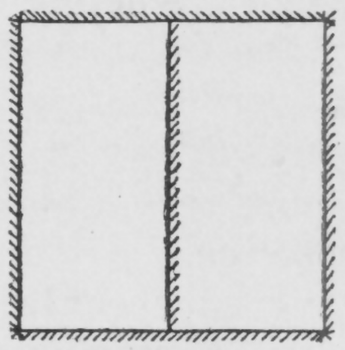
Wrong Side

Find pieces of pretty ginghams and coarser fabrics, to show variety of threads, and mount on paper. Print "Warp Thread" and "Woof Thread" along the samples.

Why should you know warp and woof threads?

You need to know to tell the up and down of cloth. In the cutting out of patterns, if you should cut cloth the wrong way of the goods you would waste material.

How to Overcast. Take a piece of white cloth eight inches square, a spool of red cotton thread No. 50 and a package of needles No. 7. Put one and one-half yards of the thread in a needle. Begin in the upper left hand corner of the square. Make no knot in the thread. The stitch is as follows: a slant stitch one-quarter of an inch deep and one-quarter of an inch wide. Be very careful that the stitches are perfectly even; that they slant in the same direction, and that they slant toward the right.



Overcasting

When the corners are reached take an extra stitch, and make each stitch on the side of the extra stitch come to the same point.

Overcast the four sides of the cloth. In joining the last stitch go over the same place two times. Fasten securely. The cloth will represent a doily for the little girl.

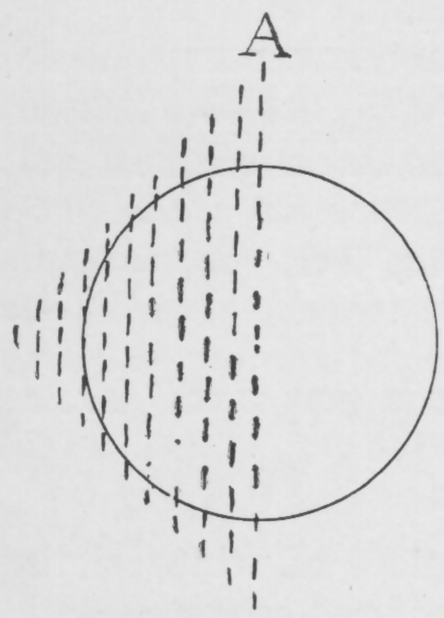
Why do we use overcasting?

Overcasting is used to finish the two pieces of cloth which make a seam. It is used in order that the ends of cloth will not pull out. Sometimes overcasting is used as a colored decoration, as in the making of a doily.

The Correct Way to Darn Stockings. Take a piece of stocking seven inches square, a piece of cardboard six inches square, a darning needle, darning cotton of color and thickness to match stocking, a spool of white thread No. 50, and a needle No. 7. Sew the piece of the stocking on the piece of the cardboard securely, basting the four sides with white thread. Sew the corners very securely. In the center of the stocking cut a hole one inch in diameter. Thread the darning needle with darning cotton. Begin to weave one-quarter of an inch from the side of the hole.

Weave the warp threads in this way: weave one thread, back three threads, back five threads, and so on, increasing the threads two each time until the center of the hole is reached; then begin to decrease in similar manner until the one stitch is reached on the opposite side. (See diagram.)

Now fasten securely and begin to weave the woof threads. Begin at point A in the diagram. Pass over one warp thread and under one warp thread, then turn and go back in a similar manner. Be sure to take up the threads the second time which you did not take up the first time. Continue to the opposite side and fasten securely.



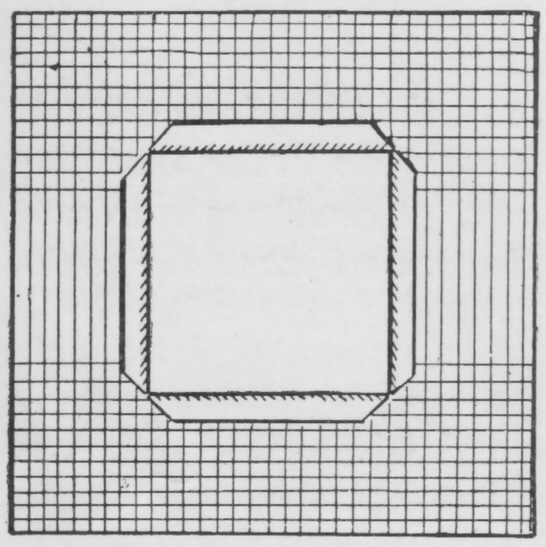
Diagram

The child may now darn one of her own stockings. Furnish her with a stocking darner. Tell her to be careful to darn her stocking in the same way that she darned the sample.

Why do you need to darn your stockings?

Stockings are continually wearing out; the earlier they are darned the easier it is to do it neatly. It is better to darn than to be continually buying new stockings. A good darn is a beautiful piece of work.

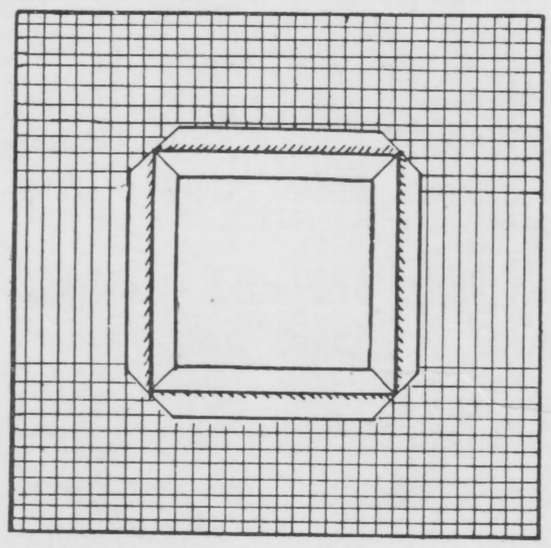
How to Mend with a Hemmed Patch. The materials needed are a piece of checked gingham seven inches square, a No. 8 needle, white thread No. 50 and a sheet of white paper seven inches square. Fold the paper diagonally, forming two equal triangles. Unfold and fold the opposite corners in the same way; then the lines are folded from opposite corners. Measure from the center on each diagonal two and one-half inches. Join these points to form a square. Cut out this square. Cut each corner of this inner hole diagonally one-fourth of an inch. Fold the four edges of the inner hole back as far as the diagonal corners will allow. This is the pattern for the hemmed patch. Cut the square piece of gingham in the same manner. Place a piece of gingham four and one-half inches square to fit the hole, matching the checks. Baste the edge of the patch to the edge of the gingham and hem the four sides. Turn the patch over on the other side; turn the four sides of the patch under one-eighth of an inch and baste the hem. This will be the right side. Overcast the edges of the sample, following the directions for overcasting. Press with a hot iron. Notice whether the threads match. A beautiful patch is one where the warp and woof threads match. Now get an apron or a dress or a piece of underwear which needs repairing and patch it.


The Hemmed Patch

Why does one need to learn to patch?

Garments, such as aprons etc., will wear out in certain places. Few can afford to throw them aside. A beautiful patch will answer the purpose many times of a new garment. The hemmed patch is used where extra strength is needed.

How to Mend with a Set-in Patch. Prepare paper and gingham as you did for a lesson on the hemmed patch. Put the patch in place with warp thread and woof thread of the patch matching the warp and woof thread of the gingham. Turn back the edges of the hole to be patched. Turn back the edges of the patch to be inserted in the hole. Place these edges together. Baste one side firmly; be sure that the pattern matches. Over hand. (The over and over stitch often called the "top over" stitch.) This stitch is started with no knot in the thread and is a stitch sewed directly upon the top of the two pieces placed together. Be careful not to take deep over and over stitches. Point the needle toward the chest and sew from left to right. Sew one side of the patch firmly and then come back on the second side. Sew the second side with the same stitch. Baste and sew the third and fourth sides. Take out the basting and press the patch.

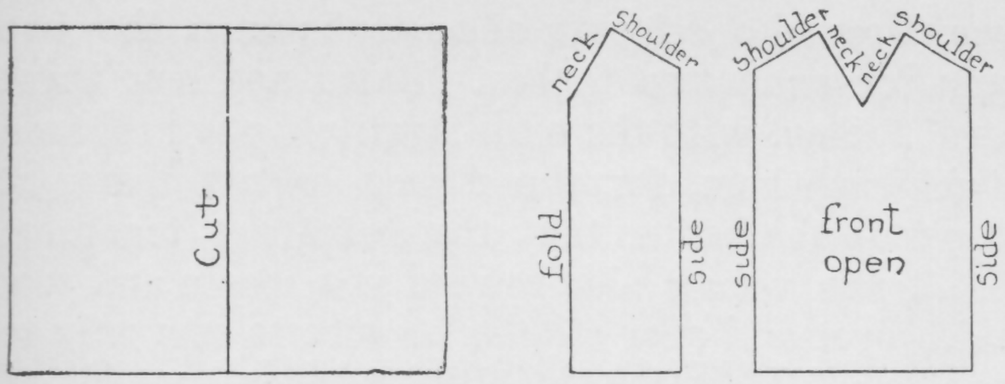

The Set-in Patch

This will make a comparatively strong patch, although it is not so strong a patch as the hemmed one. It is excellent for small patches and where little strength is needed. One is hardly able to detect a patch of this kind.

Why do we need the set-in patch?

It is a neat patch and one which shows little that the garment is mended. For most purposes it is a durable patch. With this patch it is easy to match the warp and woof threads.

How to Make a Work Apron. The materials for this are one yard of linen thirty-six inches wide, a spool of white thread No. 50 and a pattern of an apron. (Use an enlarged copy of the apron pattern furnished here.) To cut the apron, measure the child from the shoulder to the bottom of the skirt. Allow two inches for the hem. Take this length of cloth and cut the cloth lengthwise



Pattern for Apron

through the center of the goods in the fold of the goods. (See illustration.)

Fold each piece of goods lengthwise. Cut the shoulder like the diagram and cut the neck like the diagram. The back is cut in the same way. Join shoulder seams together, using the French seam. To make a French seam, sew the shoulder with the back stitch (two front and one back stitch), trim off the seam, turn the shoulder and sew again, using the same back stitch. Sew both shoulder seams in like manner.

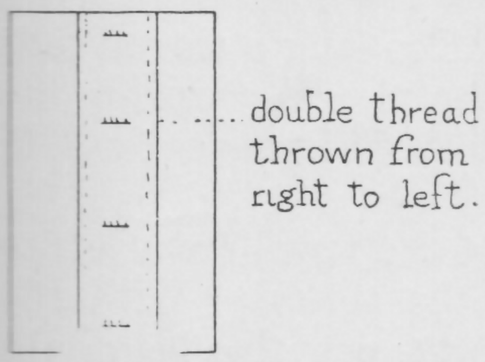
Now hem the sides of the apron by turning one-eighth of an inch and then one-fourth of an inch; baste and hem. Hem the bottom of the apron two inches in depth back and front. Turn the neck in one-fourth of an inch. Sew narrow embroidery around the neck, using the running stitch. If thought best, embroidery may also be sewed on the sides of the apron.

The back and the front of the apron are not joined. A band is made to fit the child and a button and buttonhole are placed in the band to keep the apron in place. A small pocket is placed (use the back stitch) on the right hand side of the apron.

Of what use are aprons?

Aprons protect our dresses. Aprons are ornamental. Sewing aprons are useful to keep one's work in.

How to Make a Good Buttonhole. Take a piece of white cotton cloth six inches square, white thread No. 50 and a needle No. 8. In the center of the six-inch square of white cloth form a box plait. Let the child sew the sides of the plait with the back stitch. In the center of the plait cut four buttonholes with a good pair of buttonhole scissors. Thread the needle with an arm's length of thread. Overcast the buttonhole. Do not use a knot in the thread, as we do not want a knot to show, and a knot is not necessary.



Plan for Buttonholes

Begin to buttonhole away from the corner, because the warp and woof threads meet at the corner and it is a poor place to begin to sew. Always use a single thread in buttonholing. The buttonhole stitch is as follows: place the needle through the cloth from the lower side to the upper side. Direct the needle straight toward you. Toss the thread which is in the eye of the needle over from right to left. This makes the pearl of the buttonhole. Pull the needle through and pull the thread away from you. Be sure that you get the pearl of the buttonhole, otherwise you simply have a blanket stitch.

Continue in like manner around the buttonhole until you reach the point where you began. Fasten securely by going over twice in the same place and slip the needle through the under side of the buttonhole for about one-half of an inch. Cut thread. In like manner make the other three buttonholes.

Why do we need buttonholes?

Tney serve as a means of joining our clothes. They are very strong and if well made will not fray. Buttons and buttonholes are often used as ornaments.

Putting into Practice What Mother has Taught

How to Sew on Buttons. The materials needed are white thread No. 50, a paper of pins, a needle No. 8, white cotton cloth seven inches square and six buttons of different kinds, as shank button, two-holed buttons and four-holed buttons. Turn the four edges of the piece of cotton cloth in one-fourth of an inch. Fold the sample in half. Baste the three edges (not the fold). Overhand the three edges. Thread the needle with an arm's length of thread. (Cut the thread on the slant, as it will pass through the needle more easily.) Use a double thread. Place a knot in it.

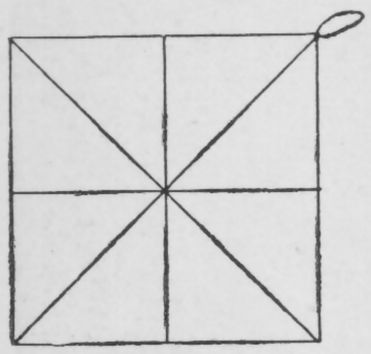
Pass a needle through the upper side of the cloth and down on the lower side. Place the button (two-holed button) in place. Pass the needle up through the hole and down through the other hole. Place a pin between the thread and the button, as this will help to keep the stitch loose but firm. When the pin is removed, after the

button is sewed on, the button has a little leeway, and will not set close to the goods, thus it will not be liable to tear the cloth. Sew the button on back and forth four times. Pass the needle in between the button and the cloth and wrap the thread three times around the button. Pass the needle to the lower side and fasten securely by taking two stitches in the same place. Remove the pin. Sew the four-holed button on in a similar manner.

Why do we need buttons?

They serve as means of fastening our clothes. If buttons are sewed on securely time will be saved, as they will not come off easily. Buttons are often used as ornaments.

Iron Holder. The materials are two pieces of gingham eight inches square, white thread No. 50, No. 8 needle, two pieces of sheet wadding seven and one-half inches square and a small piece of white tape. Fold the four edges of both pieces of gingham one-fourth of an inch. Place the sheet wadding in between the two square pieces of gingham. Baste the four edges together. Overhand the four edges. Fasten the corners securely. Fold holder from corner to corner and from side to side. (See illustration.) Sew the running stitch on the creases, beginning with the diagonal creases. (The running stitch is a very fine basting stitch.) Sew from corner to corner.



Holder

Be careful that each time you place your needle in the cloth you go through the wadding and both sides of the gingham. See if you can make both sides of the iron holder look exactly alike.

Now we are ready to sew on the tape. Cut the tape three inches in length. Turn the small end of the tape in one-fourth of an inch. Fasten with the over and over stitch. Sew up the sides of the tape for one-half inch. Sew with the over and over stitch. Place the tape at the corner of the holder and sew with the over and over stitch. If you prefer, you may make a strong buttonhole in the corner of the iron holder in place of the tape. Either the tape or the buttonhole is used to hang up the holder.

Why do you use a holder?

To protect the hands at any time, such as, for example, in removing hot plates from the stove.

How to Make a Workbag. The materials needed are a piece of linen twenty-seven by eighteen inches, thread No. 60 to match linen, two yards of ribbon one-half inch wide to harmonize with the linen, a stencil outline pattern, one spool of dark brown crochet cotton, needle No. 8 and needle No. 5. Turn the edges of the linen all the way around one-fourth of an inch; turn the two smaller ends two inches. Baste and hem these ends. Sew, with the running stitch, one-half inch from each hem, for the ribbon to run through. Turn up the bag so that the hems are together. Hold the wrong side toward you, baste and sew with over and over stitch; be sure to sew only to the hem. Place the stencil pattern on one side of the bag. Draw the pattern with a pencil. Sew with the outline stitch.

To sew the outline stitch, thread No. 8 needle with the brown crochet cotton. Use no knot in the thread. Begin to sew on a straight line of the stencil pattern. Place the needle in the cloth directly upon the line of the pattern. Take one stitch, bringing the needle directly toward you. Throw needle and thread to the left. Place the next stitch back the length of the stitch in the same line as the pencil drawing and in the very same hole as the previous stitch. Be sure and throw the needle to the left each time. Repeat, keeping the stitches as even as possible. Finish the entire stencil pattern in like manner. Fasten by taking two stitches in the same place. Cut the thread. Place the ribbon in the bag by running one-half of the ribbon in one direction and bringing the two ends out of the casing formed by the running stitch. Run the other half of the ribbon in like manner, only through the opposite hole; tie the ends of the ribbon.

Of what use is a workbag?

A workbag will hold materials and keep them neat and clean. It may be used for many purposes. A workbag makes a useful and ornamental present.

The Correct Way to Hem a Towel. The materials needed are one yard of good toweling, a No. 8 needle and white thread No. 50. Draw a thread on both ends of the towel to be sure that the ends are straight; cut on the place where the thread has been drawn. Turn the end of the towel down one-fourth of an inch. Baste this turn. Turn a second time one-fourth of an inch; crease, turn back. Place the towel with the small hem toward you. Thread the needle with an arm's length of thread. Too long a thread will waste time in drawing the thread through the sewing; too short a thread will waste time in threading needle.

Begin to sew the hem of the towel from left to right. Have no knot in the thread. With the small hem toward your chest, sew this hem with the over and over stitch. Be very careful not to take a deep stitch. Fasten securely by going over the last stitch three times. Hem the other end of towel in the same manner. Sew a buttonhole in the upper right hand corner of the towel. This buttonhole makes a splendid means for hanging up the towel.

To make the buttonhole, cut a small piece of toweling two inches square and hem it in the place where you wish the buttonhole to be placed. This extra weight gives a good thickness.

Why should we hem towels in this way?

Towels hemmed with the over and over stitch launder much better than those hemmed in other ways. Towels hemmed in this way last much longer than those hemmed in other ways. They are very attractive looking when thus hemmed.

A Good Way to Hem Table Linen. Take a piece of napkin six inches square, a needle No. 8 and white thread No. 50. Pull a thread on each side of the piece of napkin to insure four straight edges. You can be sure of straight edges in no other way. Turn the edges of the sample down one-fourth of an inch all the way around. Crease well with the finger nail. Turn the second time one-fourth of an inch all the way around. Do not baste in hemming table linen.

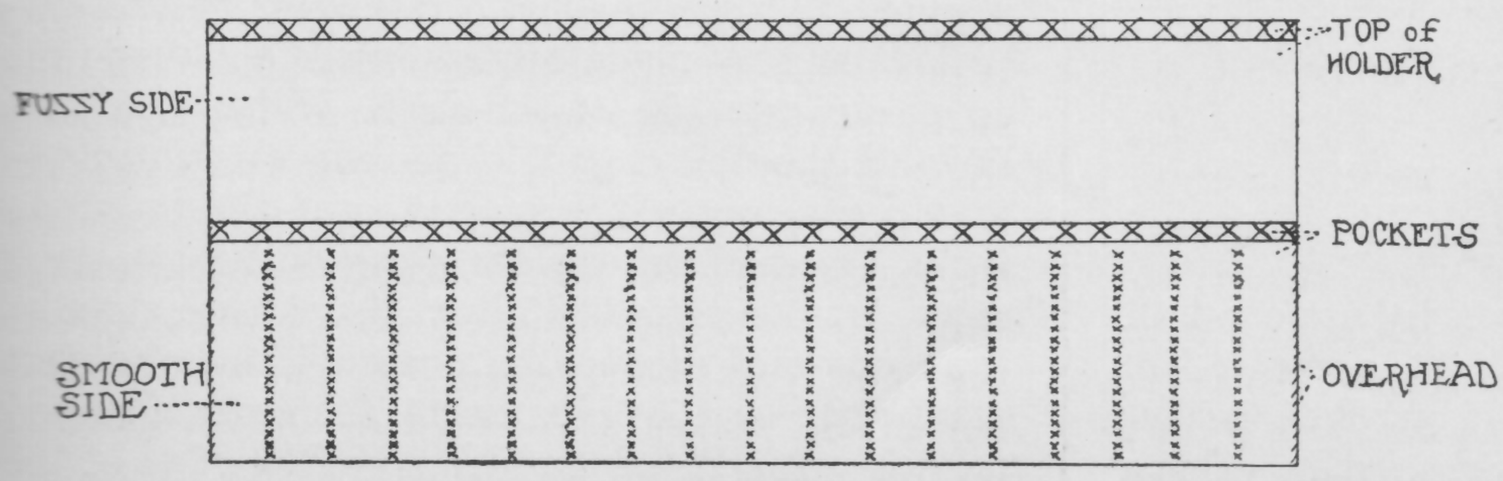
The same stitch (over hand stitch) as that which you used when you hemmed the towel, is used to hem table linen. Make no knot in the thread. Sew from left to right, and with single thread. Hold your work so that the small hem is toward you. Sew with overhand stitch for about one inch and then crease what you have done with the finger nail. Crease another inch and hem that far. Keep on in this manner until one side of the napkin is hemmed. Sew the opposite side of the napkin in like manner. Sew the two side ends of the sample napkin also in like manner. Finish by taking the same stitch in the same place three times. Finish the corner slits by using the same stitch as in the hemming of the napkin.

Why are napkins and other table linen hemmed in this way?

Table linen needs a strong hem. It launders well when hemmed in this way. This sewing makes an attractive finish for fine linen. If it is done beautifully one can hardly detect the stitches.

Making Clothes for Dolly

The Making of a Spoonholder. For materials we need a piece of canton flannel eighteen by twenty-seven inches, one ball of red crochet cotton (any color may be used), one needle No. 5 and white thread No. 50. Turn the twenty-seven inch side of the cloth down one-half of an inch, both at top and bottom on the fuzzy side of the cloth. With the crochet cotton, cross-stitch the top hem on the fuzzy side. At the bottom, cross stitch the hem on the other side. Hem the eighteen inch side one-eighth of an inch with white thread. Turn the bottom of the holder up six inches. Baste the sides up to this portion. Overhand to the same place on both sides. Divide the double six-inch fold at the bottom into one and one-half inch spaces. Baste each space with white thread. Cross-stitch at each basting space. This will make eighteen places for spoons.



Plan of Spoonholder

Cross-stitching is done as follows: Use no knot in the thread. Begin at the upper left-hand corner to work. Place the needle horizontally one-fourth of an inch in the lower edge of the hem. Pull the needle through the cloth. Place the needle one-fourth of an inch horizontally at the up-

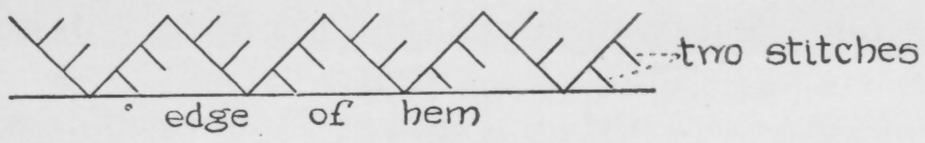
per edge of the hem. Be sure to keep the needle and thread to your right. Pull the needle through the hem. Place the needle again at the bottom with one-fourth of an inch stitch, keeping the needle and thread to the right. This makes the required cross-stitch; continue in this way.

Cross-stitch both the top and bottom of the spoonholder and also the spaces for the spoons.

When do we use cross-stitch?

Cross-stitch serves two purposes: it is a time-saver in the fact that it serves as a means of sewing and as a decoration. It is very serviceable; is stronger than ordinary sewing and is done more quickly.

A Duster. Take three-fourths of a yard of good cheese-cloth, one spool of crochet cotton any color desired and a needle No. 8. We are to learn how to feather-stitch a duster for mother. Draw a thread on the four sides of the cheese-cloth and even the sides. Turn down the four sides one-half of an inch. Turn again the same width. Baste these sides. Thread the needle with arm's length of the crochet cotton. Use no knot in the thread. Begin to feather-stitch from left to right. Feather-stitch on the opposite side from the side on which the hem is turned. Be careful to follow the edge



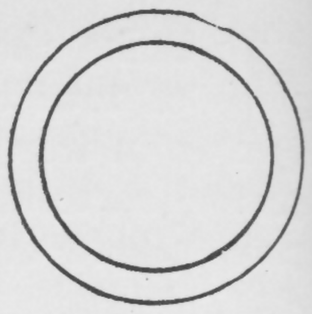
Feather-stitching

of the hem on the wrong side. The movements for feather-stitching are as follows: pull the needle through from the wrong side to the right one-half inch up the hem. Place the thread to the left and take a stitch one-fourth of an inch down. This stitch is taken on the slant. Take a second stitch like the first one. Turn the needle to the left and take two similar stitches. Turn the needle again and take two stitches similar to the first two stitches. Keep on in this manner until you have feather-stitched the four sides of the duster. Over hand the four corners with white thread. When the crochet cotton runs out, fasten your needle on the wrong side of the duster, as you finish the two stitches going upward. Then again thread your needle and start downward. This makes no break in the feather-stitching.

Where do you use feather-stitching?

In places needing strength. It is stronger than cross-stitching and more ornamental.

A Dust Cap. The materials needed are one-half yard of white lawn, thread No. 60, a needle No. 8, a roll of bias tape, one-half yard of rubber (small white roll) and one casing-needle. Cut a circle from paper eighteen inches in diameter. From this pattern cut the dust cap. Hem the circle of cloth by first turning a hem one-eighth of an inch and then a hem one-fourth of an inch; baste and hem. Measure in from the outer circle one and one-half inches. Baste the bias tape around this inner circle. (See diagram.)



Cap

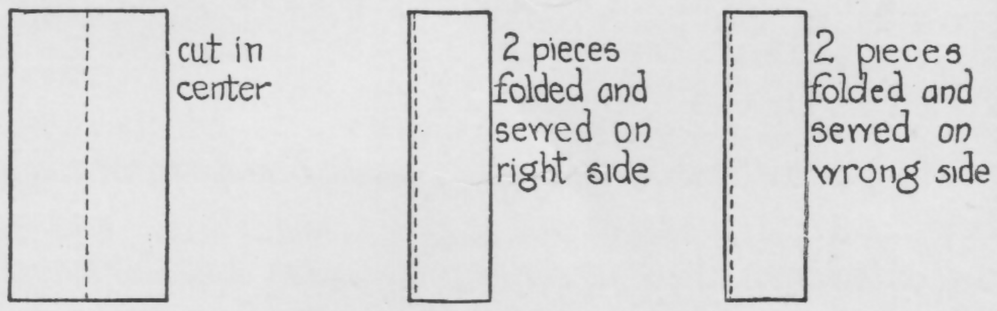
Sew the bias tape on both sides with the back stitch. Be careful when you finish the end of the tape to turn both ends back one-half inch. This will leave a place for the rubber. Put the rubber in the casing-needle and run it through the white tape casing. Measure the head band and tie the rubber according to this measurement.

The caps may be decorated with feather-stitching on the outer hem, if desired, but do not use lace on a dust cap. The new lesson of the stitching on of the bias band will be a splendid thing for the child to learn, and she will enjoy the running in of the white rubber.

Why do we need a dust cap?

A cap will protect the hair from dust. It is an attractive article for home use. One looks neater when wearing a cap. It keeps the hair in place. It prevents the hair from coming in contact with the food, etc.

The French Seam. Take a piece of white cloth nine by five inches, a spool of white thread No. 50 and a No. 8 needle. Cut the white piece of cloth in the center and you will have two equal pieces, nine by two and one-half inches. Place these two pieces together to form a seam. Baste them together, using a fourth-inch seam. Fasten the basting securely by taking two stitches in the same place. Just underneath the basting begin to



Diagrams of French Seam

sew the seam. Sew by taking two stitches forward and one stitch backward. Continue in this manner. Fasten the end of the seam securely.

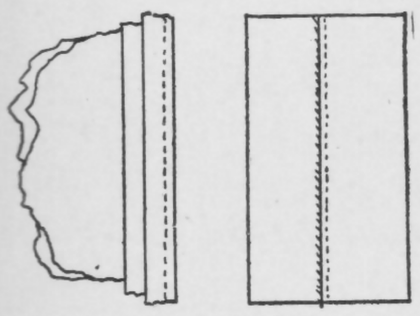
A French seam is always sewed the first time on the right side of the cloth. When you have finished the first seam trim the edges down evenly with a sharp pair of scissors to one-eighth of an inch. Much of the success of a good French seam depends upon this trimming. Turn both sides of the cloth back so that the raw edges of the first seam will be hidden. Baste the seam a second time one-fourth of an inch from the edge of the

cloth. Sew, using the same back-stitch as before. The second seam, of course, will be on the wrong side of the goods. Fasten securely by passing over the same stitch three times. This French seam makes a durable seam and one which has a very smooth finish for underwear. The seams having the closed edge do not need to be over-cast.

Why do we need a French seam?

It makes a very durable seam. It has a very fine finish and requires no over-casting or other finish. It is easily and quickly made.

A Good Way to Make a Fell Seam. Take a piece of white cloth nine by five inches, white thread No. 50 and a No. 8 needle. Cut the piece of white cloth into two equal parts nine by two and one-half inches. Place these two pieces together. Baste a seam along the nine-inch side one-fourth of an inch in width. Sew the seam just underneath the basting, using the back-stitch. Fasten the end securely. In the fell seam you cut off one side of the seam only. (See illustration.) Trim the upper edge of seam halfway back. Turn the seam flat on the goods so that the under part of the seam will pass over the lower part of the seam. As you have trimmed the upper part of seam one-half of its width the lower part will entirely cover the upper part. After turning the seam flat, turn the edge of the under part of the seam in one-eighth of an inch. Baste carefully and then begin to hem this seam. Fasten the end securely. This will make a beautiful flat seam. It differs from the French seam in that the first seam is sewed on the wrong side, and that it is not a raised seam, like the French seam, but is perfectly flat.



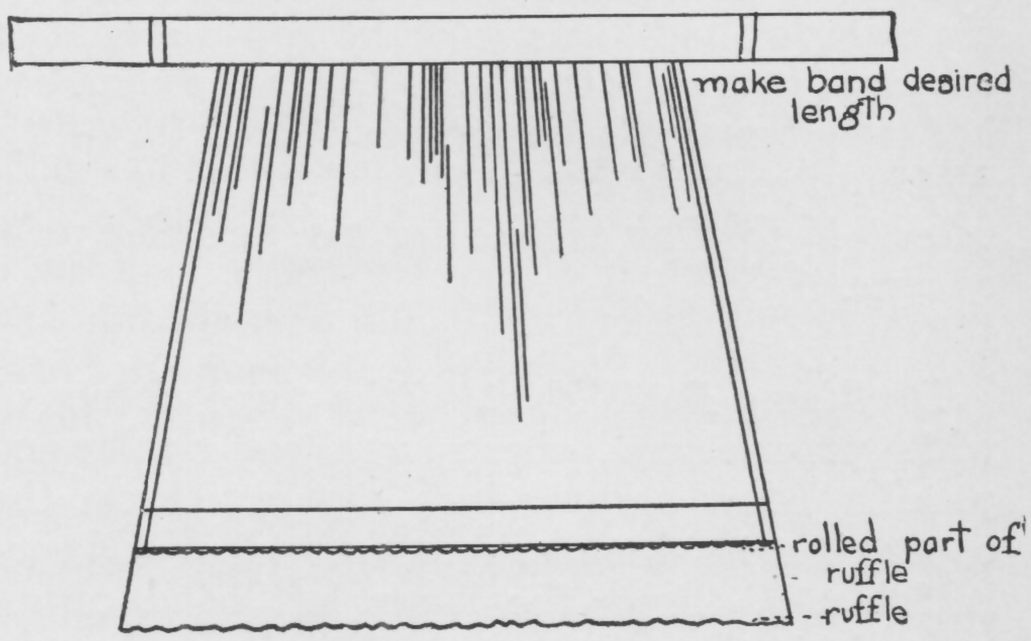
Fell Seams

When do we use a fell seam?

When the seam is to touch any part of the body the fell seam makes a good seam because it is flat. Where strength is needed it makes a good seam.

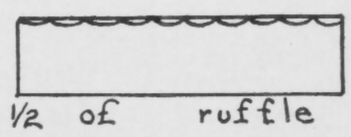
A Good Way to Roll on a Ruffle and Make a Doll's Apron. The materials needed are a piece of white lawn eight by six inches (six inches on the warp threads and eight inches on the woof threads), a No. 9 needle and No. 60 white thread. Prepare the lawn by pulling a thread. Prepare a piece of the lawn for the ruffle one inch wide and twelve inches long. Hem the sides of the lawn one-eighth of an inch. (The sides are the six-inch warp threads.) Hem the bottom of the apron (that is the eight-inch side or woof threads) one-half of an inch. Hem the piece one inch by twelve inches with a one-eighth inch hem. Now be ready to place this piece on the hem of the apron for a ruffle. The rule for a ruffle is to make the ruffle one and one-half times the length of the piece on which the ruffle is to be be sewed.

Divide the bottom of the apron into two equal parts. Divide the ruffle into two equal parts. Place a pin at both of these points. Hem the small ends of the ruffle. Begin to ruffle the twelve-inch piece like this: roll the raw edge between the thumb and first finger until the raw edge is completely hidden. Insert the needle in roll and take a slant stitch exactly like an over-cast stitch. Take three stitches of this kind, being careful not



A Ruffled Apron

to go back far enough to sew into the previous stitch. Pull your thread and the cloth will begin to ruffle. Continue in this way until you have ruffled and pulled up one-half of your ruffle. Sew to one-half of the bottom of the apron with the over and over stitch. Continue in the same way with the other half of the ruffle and sew it on the second half of the apron. This will make a strong ruffle and one which will iron beautifully. Place a band on the top of the apron.

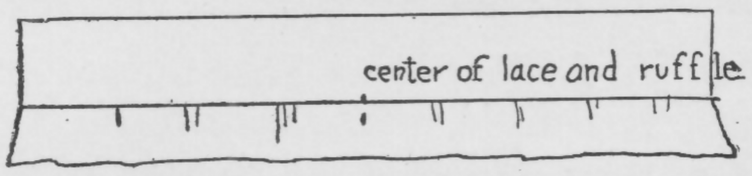


To cut the band the desired length for the doll, cut the band on the warp thread of the goods. Place the center of the band on the center of the apron. Gather the top of the apron with the running stitch (very fine basting stitch). Hem the band to the body of the apron.

Why do we use ruffles?

Ruffles are often used to lengthen garments. They make a neat, pretty, cheap finishing for many things.

Sewing on Lace. Use the doll's apron just made. Take twelve inches of narrow white lace, a No. 9 needle and No. 60 white thread. Find the center of the ruffle which you sewed on the doll's apron



Dividing the Ruffle and Lace

and the center of the lace. Place a pin in these two places to insure you a perfect division of lace and ruffle.

Hem the ends of the lace with one-eighth inch hems. Place the edge of the lace to the edge of the ruffle. Be sure that the wrong side of the ruffle is placed to the wrong side of the lace. This is what we call placing material face to face. Baste the lace on the ruffle. Keep the side of the lace toward you. Sew lace on the ruffle with the over and over stitch, sewing from left to right. Fasten ends securely and cut thread.

Of what use is lace on garments?

The sewing on of lace and embroidery lengthens the material, and often a garment may be used when otherwise it would be too short. Lace and embroidery add to the beauty of a garment as well as to its utility. Making a garment attractive is often-times of great value both from an artistic and a commercial point of view.

Drafting a Doll's Skirt. Take three sheets of white paper seven inches square, and a ruler and pencil. Draw a seven-inch square. From the upper right hand corner measure in four and one-half inches. From the lower left hand corner measure in four and one-half inches. Connect these two points with a slanting line and cut. These are the side gores. (See illustration.) Turn one gore the other way and both gores are face to face.

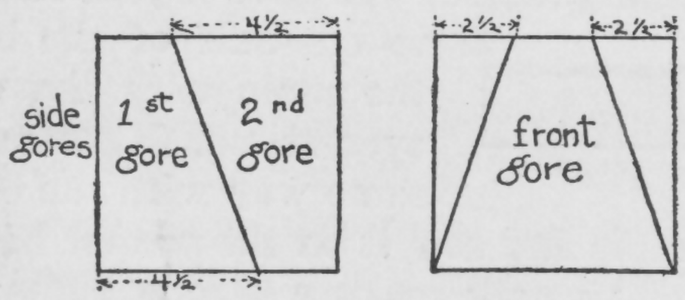


Diagram of Gores

For the front gore take a second seven-inch square of paper. From the upper right hand corner measure in two and one-half inches. From the upper left hand corner measure in two and one-half inches. From these points draw lines to the bottom corners. (See illustration.) This is the front gore.

The back gore is simply the third seven-inch square.

What is the value of drafting a pattern?

It teaches you the different parts of a skirt, such as front gore, side gore and back gore. From this, you will be able, some day, to draft large patterns.

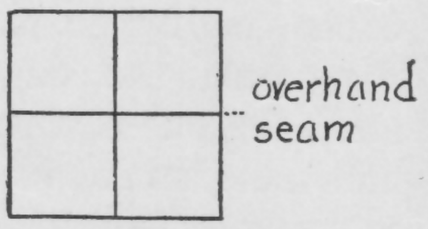
Making a Doll's Skirt. Take the pattern which you have just made, white thread No. 60, a No. 9 needle, three pieces of white lawn seven inches square and a paper of pins. Place the three pieces of the pattern on the three pieces of lawn. Be sure to cut the front gore double. The side gores must be cut straight (with the warp thread of the goods).

After cutting from the pattern, pin the three pieces of the pattern together and put them away. Baste the straight edges of the side gores to the front gore. Sew with the French seam. Sew the edge of the side gore to the back gore, using the French seam. Place a half-inch hem at the bottom of the skirt. In the center of the back gore make a slit one inch in length. Cut a small piece of white lawn the length of the slit (two inches) and one-half of an inch wide. Sew around the slit and hem down on the wrong side. Cut a band the desired length, one-half of an inch wide. Sew on the band as you sewed on the band of the apron. If you wish, you may trim the bottom of the skirt with a bit of narrow lace.

Why did you make the doll's skirt?

It is a pleasure to dress dolls. A doll's clothes are made similar to our own clothes, and the making of them will teach us how to make our own clothes. The doll's skirt was a review of stitches we have learned.

How to Patch a Quilt. Take pieces of gingham six inches square, a No. 8 needle and thread No. 50. Cut the gingham pieces exactly even, all of them six inches square. Take two pieces, turn in one edge of each one-fourth of an inch. Place these two pieces face to face. Baste on the side of the turned down edges (the wrong side). Sew the edge with the top over stitch (the over and over stitch). Sew very firmly and fasten ends securely. Sew in a like manner two more pieces of the gingham. Turn the sides of these two pieces which you have sewed and baste the four pieces together, making a four-pieced square. (See illustration.)



Patchwork

In like manner sew four more squares together, and keep on sewing four squares at a time until you have enough of these squares to form a good-sized quilt. Place these squares in a row, using a narrow strip of a pretty colored gingham between them. Sew this strip of gingham in the same manner as you sewed the squares. When all the strips are sewed together, the mother may show the child how to place the cotton in between the square and the lining and how to tie the quilt.

This quilt may be done on rainy days or at odd minutes which the child might otherwise waste.

Why do we piece a quilt?

It is almost a lost art and one which we will do well to bring back. Pieced quilts are beautiful if well made. They help to employ our leisure moments. They give us skill in sewing and in the making of designs.

Children's Work in the Home

By GEORGIE L. UNDERWOOD, Formerly President Parent-Teachers' Association, Highland Park, Ill., Secretary for Presbyterian Young Women, University of Michigan.

Why and How Children Should Help in the Home

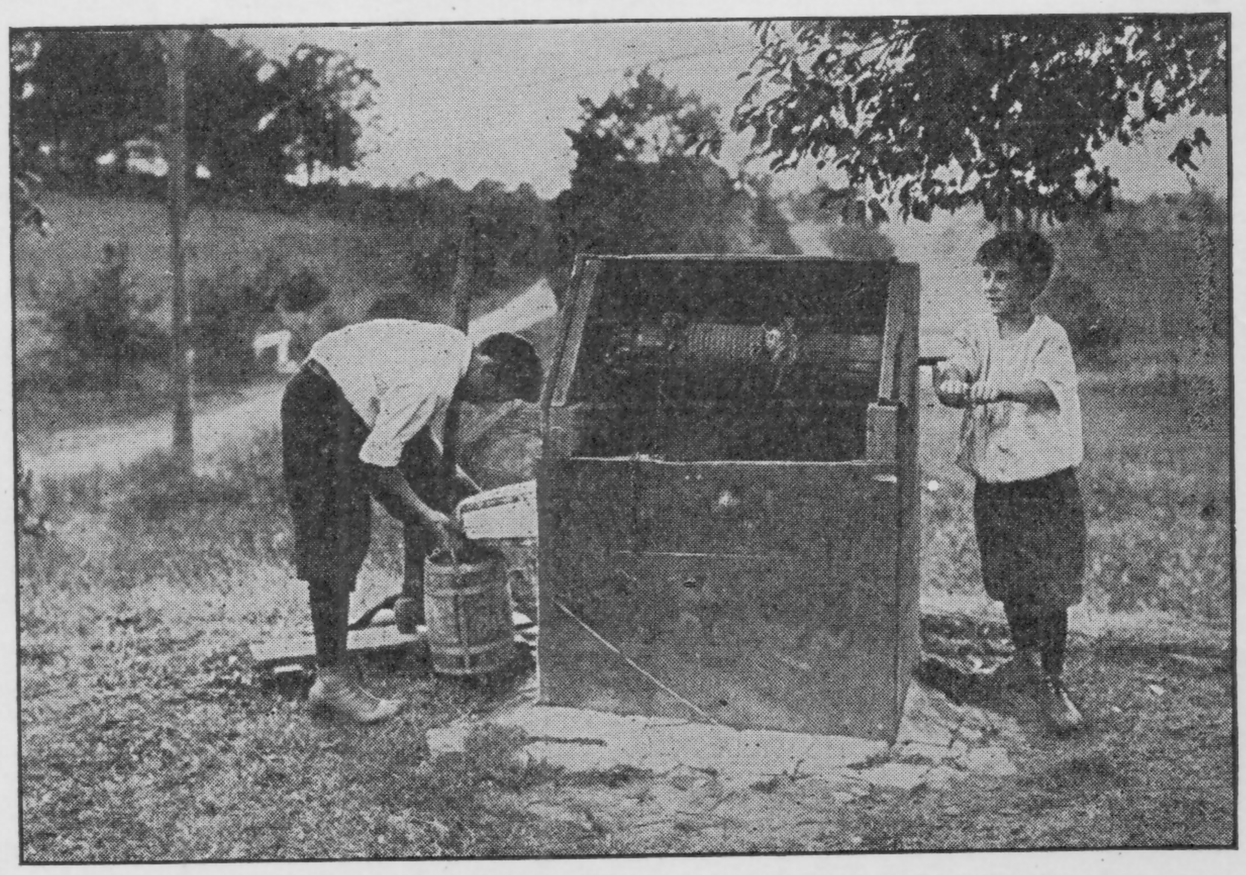
"The beauty which old Greece or Rome
Sung, painted, wrought, lies close at home."

DO YOU remember Henry Reed?" asked a superintendent of elementary schools of a woman who was visiting in her home town.

"Yes," she replied, "he lived just opposite your school, did he not? A fine old family. If I remember correctly Henry had a good record in school." "Yes," said the superintendent, "he did, but he hasn't turned out well—a kind of a good-for-nothing. Oh, yes," he continued, "Henry had the best of educational advantages,—college, law school, and all that,—but he either can't make a living or doesn't care to. He is going to be married soon and I hear he must get some kind of a position to make a living for two, for the family funds are gone."

"Now tell me," asked the interested visitor, "what, in your opinion, has been the mistake in the development of the life of that boy?"

"Honestly," came the quick reply of the thoughtful superintendent, "the school did its part, and he responded well; the community did its part; no better environment for child life could be found; but the home never gave him a chance to grow. It provided everything but an opportunity. I used to think, as I looked from my office window out over the beautiful grounds of the Reed home that if only they had given Henry some responsibility in the upkeep of that home! There were splendid man-making tasks in the yard alone which would have cultivated an interest in nature studies, in the home and community life, and would have made a large contribution to Henry's character development, but a man was hired to do all this! The work was not enough to test a man's energy or ability and the man decayed, or rather failed to reach his higher possibilities because of the lack of a pressure of real work, and Henry suffered because of no responsibility and no work. The man, because the work was light, was paid a salary too small to support a family in the poorest way. Henry had too much money given him. Never having earned it, he had no idea of its value, and, for the same reason, he had no appreciation of the value of time. He lost interest and respect for the home because he had not been given responsibilities, which breed interest and respect. Yes, I believe the home is to blame for Henry's poor preparation for life and the sufferings that he must endure in consequence of it."



These Boys Keep the Home Supplied with Fresh Drinking Water

That's the whole story, and Henry represents millions of American boys and girls who haven't had a chance in the home. They have been crippled and made dependent by having been waited upon; they have been made selfish and unhappy and useless by an over-indulgence which has choked the unfolding life within; they have not been given the chance to practice self-sacrifice, that process by which all real happiness is made

possible; they have been trained to expect much instead of giving much, and the demands, complaints and disrespect of the adolescent boy and girl of today are as an ethical indigestion resulting from an over-indulgence on the part of unwise parents.

If, then, besides the meeting of physical needs, the home has so large a part in the preparation of a child for life efficiency and happiness, let us find out what is required of the home and the best methods of meeting the need.

There are many kinds of homes, no perfect ones —there seems always to be an over-balance of either the good or bad, and yet when we consider how much the child draws from the home environment and how lasting it is, we agree that the home should be the most perfect of all institutions for child development.

Let us take a bird's-eye view of several homes, and from their faults and virtues, from their failures and successes, make a composite picture of what a possible, if not a perfect, home may be.

Little, trembling Genevieve went from door to door to ask for work. She was seventeen years old. She did not look more than fourteen. She had been obliged to work since she was nine years old. She had to find some home that day for, because of a petty quarrel with her sister, her father had put her out of the home the night before, throwing her coat and hat after her and telling her not to come home again.

She had been reminded at table that the food she was eating was not earned by her, neither was her bed. Her clothes she had bought on the installment plan and the debt was another weight hanging over her day and night. Her mother often told her that she was the worst girl in town. The quarreling at home fostered a natural fiery temper, ready to fight at anything; the father's cruelty produced a deceit which became a part of her make-up, the mother's suspicions made her untruthful, and the things which other girls had and for which Genevieve craved made her dishonest.

Truly she had a load of responsibilities and a forced independence given by the home, but how was she prepared for her work in the world?

A bitterness toward every one, a wrong attitude toward work which brought no joy, an impatience that made it impossible for her to overcome any difficulty, a disrespect for those in authority over her, the seizing of what she wanted regardless of what it cost,—a little wild animal gnawing and biting its way through a hard world. Schools and churches did what they could, but the home failed and a dangerous woman was given to the world.

But let us look into another home: Mother and father beautiful, self-sacrificing, loving and generous, a son and daughter enjoying all the comforts and the many luxuries of that home. Perhaps we can catch in their conversation something of the results.

"I suppose you would like me to appear on Easter Sunday in these horrid old clothes?"

"But, my son," gently responded the mother, "you have had two new suits, a new overcoat, and many additions to your wardrobe since Christmas and I do not think that you need more."

"How do you know my needs? It is not your wardrobe. No one tells you what you need and do not need. You go to a store, buy what you like and charge it, and I shall do likewise. Besides, I want some money before I go back to college. My allowance is much too small. I am not able to keep up with a decent bunch of fellows because I have to plead poverty all the time. There is no sense in it!"

"Mother," said the pretty daughter on the other side of the table, "I hope that you are not going to use your electric this afternoon for I just must have it. A crowd of us girls are going to a show and then I'm going to bring them home for dinner afterwards, and we will have some fun in the evening, just a little party of a dozen or so."

"Yes, dear, I should be glad to entertain your friends, but the maid is leaving today and I fear I am not equal to serving the kind of dinner and evening refreshments you would like to have."

"Of course, maid leaving again! It is always so when I want to have company. What is the use of having a home anyway? Father, you will have to take us all to the Club for dinner, for I just can't disappoint the girls. I wish we could get a maid that would have to stay and do things."

The boy got a new Easter suit and the girl gave a beautiful dinner party at the Club, as a result of a long over-indulgence on the part of mother and father during their childhood training and an inability at this stage of development to stop that kind of feeding. A lack of home responsibility for these children and an unwise love on the part of these parents had produced in this beautiful home a son and daughter who gave back to their mother and father a disrespect that stabbed their hearts, and which was later to give the world two discontented, selfish beings.

But here's another home where two little girls have a thoughtful mother. Many little tasks and home responsibilities are given these children. They love all the creations of nature and know how to play and sing. One of mother's great theories of child development is to allow all action to result from the child's desire, which must not be crossed, for harmony should be the atmosphere for character growth. If the child is requested to do anything, long arguments follow with the concluding remark from mother, "Very well, dear, I am sorry you do not want to do that for mother." No obedience of the old-fashioned variety is taught, no hardships are encountered. "Do as you please and be sweet"

Entertaining Themselves

is accomplished, but I wonder how the old world is going to teach them the law of obedience which must be learned if life is to be successfully lived. Family and guests give their undivided attention to these children, and while they return much love in their sweet caresses, I wonder if they are cultivating a deep respect under that love, that will give to mother and father something better and more costly than a caress when they reach the "teen" years.

There are two little boys weeding in the garden. The sun is hot and they want to play, but one hour must be given to the needs of the family each day, and at one season of the year this is weeding in the garden. The mother is at the window watching—not the weeds that are pulled up but the spirit in which the work is done, and any manifestation of the wrong spirit turns the hands of the clock backward ten minutes and the play-time simultaneously grows shorter ten minutes. "Easier to have a gardener take out those weeds?" Oh, yes, but how about the weeds in the child nature?

A little music must be put into those lives, a nice open door of expression, a nice safe-guard of interests in the years to come. But that means practicing, another sacrifice of freedom and play, and mother, as is her custom, calls a meeting of the council of three (sometimes father is admitted when he is at home) and a decision is made by a majority vote as to how much practicing shall be done each day and the penalty imposed for any failure to obey the rules. Minutes of these meetings are kept and a copy of the new rules is pinned to the piano drape.

Certain individual duties are expected of every child in the family, such as washing the face and hands at regular stated intervals, changing linen, brushing the hair, cleaning the nails and the teeth; making the beds, etc. A list of duties of this kind is type-written and pinned to the bedroom door—not ornamental, perhaps, but convenient and better than a constant nagging which wears to a disadvantage upon mother and boys. A penalty of one cent for a neglected duty is large when the entire earnings of a week are but ten cents. Truly, more than ten cents' worth of real work is done during the week but only extra things are paid for, because each member of the family must give of his service to his home without compensation—pardon me, I mean without *seeming* compensation. However, the compensation does come, so big and so wonderful, not in terms of dollars, but in big nuggets of love and respect for home and for the parents who have taken the time, the patience and the wise love to open in the home the opportunity for that co-operative service which makes appreciative children and useful citizens.

The investment of the ten cents is guided, too. All for self-indulgence would not be a wise investment. Once in a while, a gift costing a half or the whole of a week's earnings will teach the definition of a real joy. If mother and father should buy the gift it would be theirs, but if the boys used their own money it would be their very own gift,

Taking Care of the Pets

and they have a right to the reflected joy which comes back to a real giver. The offering at Sunday school is mother's or father's if *they* have given the money "to put in," but one penny of the child's own earning is his own honest gift and the kind God is abundantly able to bless.

May I tell you the story of "The Other Fellow?" One day two little boys were playing in their nursery, when mother returned from a meeting where she had heard some interesting things about a school for mountain boys and girls in the south. Some of the information she wove into a simple little bedtime story. One boy, in sympathetic interest, jumped from his bed, dug down into the corner of the drawer which held his very own belongings and returned with a five cent piece which he handed to his mother. "Just you give that to that 'Other Fellow,' and I bet you the street car man will take him to school!" From that time on "The Other Fellow" was a member of that family. For long periods of time he would be much neglected, seemingly forgotten. Then a chance to share would come and "The Other Fellow" would get a portion — small, but enough to keep him alive in the thought of the boys, and enough to have mother determine that some day "The Other Fellow" would be made real to them. Years passed, the boys went to college—wasn't it splendid that they were fortunate enough to go to college?—but what a dangerous time, getting, getting, getting, with no chance to give; then mother thought of "The Other Fellow." There was the chance for her boys. She visited the mountain school. She found "The Other Fellow." She told her boys about him, and so over hills and valleys stretch two arms to grasp the hand of "The Other Fellow." Two voices say in boy fashion, "Sure you can go to college. We are all traveling along the same road. Come along. When you have finished in your mountain school and we in our Eastern college we'll need one another more than ever. Come along."

A Pleasant and Useful Task

So much preaching and teaching upon helping others arouses the child's sympathetic desires but, Mothers, that feeling will deteriorate into a sentimentality unless it is expressed in action. Only through action does it become character.

Let us not be content with a superficial expression of love. "I love you," and a caress are soothing to the mother heart, but if she would only seek that expression in an act of service or self-sacrifice the child would get a better understanding of what love real'y is. Later that understanding will be a needed guide when the emotions that sway the heart life are to determine great life problems.

If the home is to retain its most valuable function in life—training—it must give the child a chance for real service, that he may feel he is a real and necessary part of the home, and a chance for real self-sacrifice when duty will take play-time, when love for father or mother will demand giving up some pleasure. When the home denies these opportunities of character-growth to its children, it is not only neglectful but it is working a positive harm in the life of the child and neglecting its obligation to give to the world the best kind of a citizen.

Many years ago it was necessary for the children to take an active part in the many home duties. There was water to draw and carry from the pump, wood to saw, coal and ashes to carry, errands to run, mail to bring, etc., but modern appliances have eliminated many of these duties and the difficulty now is in finding real tasks for children to do. It may be helpful, therefore, to suggest some which every boy or girl can do regularly in the home.

For Boys:

Empty waste-paper baskets and burn the papers, or carefully save them to sell.

Care of newspapers and magazines to be passed on regularly to others to read, or be carefully stacked in an especial place to be sold later.

Beat or clean rugs.

Care of house plants.

Wait on table—at least occasionally—that proper rules of serving may be known, and that an appreciation of service for others may be cultivated in the boy.

Helping with the Home Tasks on the Farm

Attend to dining room; after each meal "crumb" the table and sweep the floor.

Washing windows.

Waxing floors.

Mopping kitchen floor.

Cleaning porches.

Attending to the supply of wood or coal for the fireplace and keeping the hearth clean.

Care of lawn and flowers a certain amount of time each day.

Sweeping pavement in yard and on street. Sponging and pressing own clothes.

Cleaning, taking off and putting in screens and storm windows.

Keeping house clear of flies.

Every boy should have a workshop in the house, or, better still, build his own workhouse in the yard, especially between the ages of ten and sixteen when there is interest in "making things," and boys are susceptible to suggestion. Let him make some needed or useful things for the home and call upon him for repairs even though they may not be as well done as the carpenter could do them. The boy will be greatly helped by the experience of work and service.

For Girls:

Care of table (written rules until learned), allowing choice of table decorations, flowers, candles, jellies, pickles and little surprises for certain days.

Making shades for candles, and doilies for the table.

Care of living room, putting it in order each morning before breakfast, and caring for the flowers.

Care of own room before going to school, using list of things to be done, such as:

1. Bureau in order.
2. Washstand in order.
3. Soiled towels put away.
4. Clean towels in place.
5. Desk in order.
6. Bed made.

Once a week thoroughly clean own bedroom according to written directions which mother has prepared.

Responsibility of the dusting or cleaning of some one of the family rooms—dining room, library or living room or hall, once a week.

Care of silver once a week.

Serving afternoon tea for mother.

Care of an invalid's tray.

Cleaning ice box once a week.

Cleaning closets once a week.

Cleaning bureau drawers once a week.

Washing dishes.

Making own aprons to wear in doing housework.

Making a bag for rags.

Making a bag for wrapping paper and string.

Making shoe bags for the family use.

Keeping guest room in order.

Keeping games and toys of younger children in order.

Waiting on table.

Occasionally cooking a meal (father's or mother's birthday dinner).

Doing the work of preparation for own parties—baking the cakes, putting the house in order, etc.

Helping in making her own clothes.

A well-known college president recently said, "Education can not be effected by the schools alone; some of the most dangerous people to our community are educated people who have not an educated conscience nor an educated will. It does every boy and girl good to do something he doesn't want to do toward some end that should be accomplished."

Every task given to the boy in the home is training the conscience and will power of that child, and when in the latter "teen" years and early twenties he goes out into the world or to college, he will have the necessary training which will help him choose his life work, his life friends and his life companion.

Too many boys and girls reach this great choosing time of life with no judgment because the will power has not been exercised in the home through work in which judgment must ever play an important part and be strengthened by repeated experiences.

Work in the home is not attractive for several reasons.

1. It is not made definite as to time, amount and method.

2. There is a nagging about it, instead of written rules and certain penalties for failures and certain rewards for successes.

3. It is not work that is felt to be necessary, a real responsibility, a something upon which the family depend for comfort and without which they would suffer an inconvenience or real hardship. The comfort or help to the family should be felt by the child to be the real reward and the discomfort the real punishment for not doing it.

4. The home of today holds such high standards of work that the child can not reach them.

"Better be a happy home-keeper than a perfect house-keeper," says some one who would give children a chance in the home. The maid can better do the work but your child needs to do it. Some of the plants may be lost under the care of a child, but it is worth the loss in giving the child the experience.

5. The task must not be so great that the child can not finish it. Insist that the child complete what he sets out to do. Otherwise he will cultivate a fault of not "sticking to it" which will make a failure of his life.

6. Duties are not varied according to the age of the child. A baby two years of age may have regular and definite home duties which may be increased as age and ability increase.

7. Credits are not given in most schools for definite work done in the home. Some schools are not only doing this but offer to their patrons four schedules of time, that the child may be in the home at a time when there is home work for him to do and yet miss nothing of his school work.

Birthdays are wonderful opportunities for character growth if we make them days of giving rather than getting. Allow the child on his birthday to do some helpful thing for some one else or for each member of the family. This is his own day; like Pippa he can use it to make others happy.

It is to be regretted that some of the old customs are going out of the home. Reading aloud in the family circle is wonderfully helpful to the self-expression, self-confidence, and self-giving of children, and there is a real benefit to the parents, for the child can bring the best of literature from the school which will aid in the general culture of the home and cultivate a taste for the best in thought, conversation and reading.

The Children's Appeal

"Give us light amid our darkness;
Let us know the good from ill;
Hate us not for all our blindness;
Love us, lead us, show us kindness;
You can make us what you will.

"We are willing; we are ready;
We would learn if you would teach;
We have hearts that yearn towards duty;
We have minds alive to beauty;
Souls that any heights can reach.

"We shall be what you will make us;
Make us wise, and make us good;
Make us strong for time of trial;
Teach us temperance, self-denial;
Patience, kindness, fortitude.

"Look into our childish faces;
See you not our willing hearts?
Only love us, only lead us;
Only let us know you need us;
And we all will do our parts.

"Train us; try us; days slide onward,
They can ne'er be ours again;
Save us, save from our undoing;
Save from ignorance and ruin;
Free us all from wrong and stain."

Such the children's mute appealing;
All my inmost soul was stirred;
All my heart was sowed with sadness,
When a cry like summer's gladness
Said, "The children's prayer is heard."

— *Selected.*

Home Penmanship

By GEORGE A. RACE, Director of Penmanship, Department of Education, Bay City, Mich.

How to Help the Children's Writing

IT WILL be the purpose of this chapter to make, in a simple, general way, such suggestions as will help parents to aid their children in learning to write, no matter what system or method of writing is used in the school or what school they attend.

Writing is perhaps one of the first links to connect the home and school. It has long been one of the first lessons that children have carried home to show their parents. If after the first few days in school the child failed to bring home something he had written, such as his name or the word "cat," it was quite generally understood that something was wrong with the teaching.

The last few years have seen a great change in the method of starting little children on the road to writing. In the past it was not taught in a manner suitable for children to grasp, but from the beginning the method was one more nearly fitted for the adult mind.

Many well informed parents are anxious to help their children in their school work, but they say, "Ways of teaching children have so changed since I went to school that I fear to help because I don't want to confuse or hinder the work of the teacher when my children begin school."

Writing is no exception to this change in the method of teaching, but in fact has undergone quite marked changes. Teachers no longer employ the same methods for children as they do for adults, nor do they expect the same results. Materials for writing have become so cheap that blackboards, paper, chalk, colored crayons, pencils and even pens are given children in the home before definite training in their use can be given by the school.

The matter of learning to write consists in the right use of these instruments of writing and in the acquiring of correct habits from the start. We know it is always easier to *form* than to *reform*.

Just here one sees that a little knowledge of the methods used is most helpful to parents.

The method and system in general use in the schools at present is one based on what is commonly called Muscular or Arm Movement Writing.

The purpose of this Muscular or Arm method is to develop, by systematic training, the large muscles of the arm from the shoulder to the lower arm. In small children it is sometimes termed "whole arm movement," because the forearm

Correct Way to Hold Chalk or Crayon

does not rest on the desk or table, but is swung from the shoulder while the hand glides on the nails of the third and fourth fingers.

The developing and training of these muscles is much slower and takes much longer than by the old method of script drawing with the fingers. Because of this fact little children require consistent

practice and supervision, since poor habits of position and pencil-holding defeat the aim of good penmanship teaching in later years, namely, an automatic movement of the writing machinery so as to give an easy, rapid, legible style of writing.

For lack of a better name, we will term all writing by children, whether with chalk, crayon or pencil, from the time they are first interested in the act of how to write until they enter the first grade of the public schools as Kindergarten Writing. However, it should be kept in mind that what is being termed writing is not at first writing but play for muscular development. It is not at all essential that little children learn to write, but that they become trained for greater co-ordination of mind and muscles. If this is carried out systematically, when the time comes for writing they will be able to carry the work along in a natural, easy manner.

Don't think in this Kindergarten stage of writing, that because children are not forming words and sentences they are not learning to write. They might be able to form words and sentences by the score and still be far from getting the best foundation for future work.

Any large letter that may be used is not for the sole purpose of teaching reading or writing, but is used simply as a means of developing co-ordination of the mind and muscles. Of course the children soon learn the true worth and relation of these forms to both Reading and Writing.

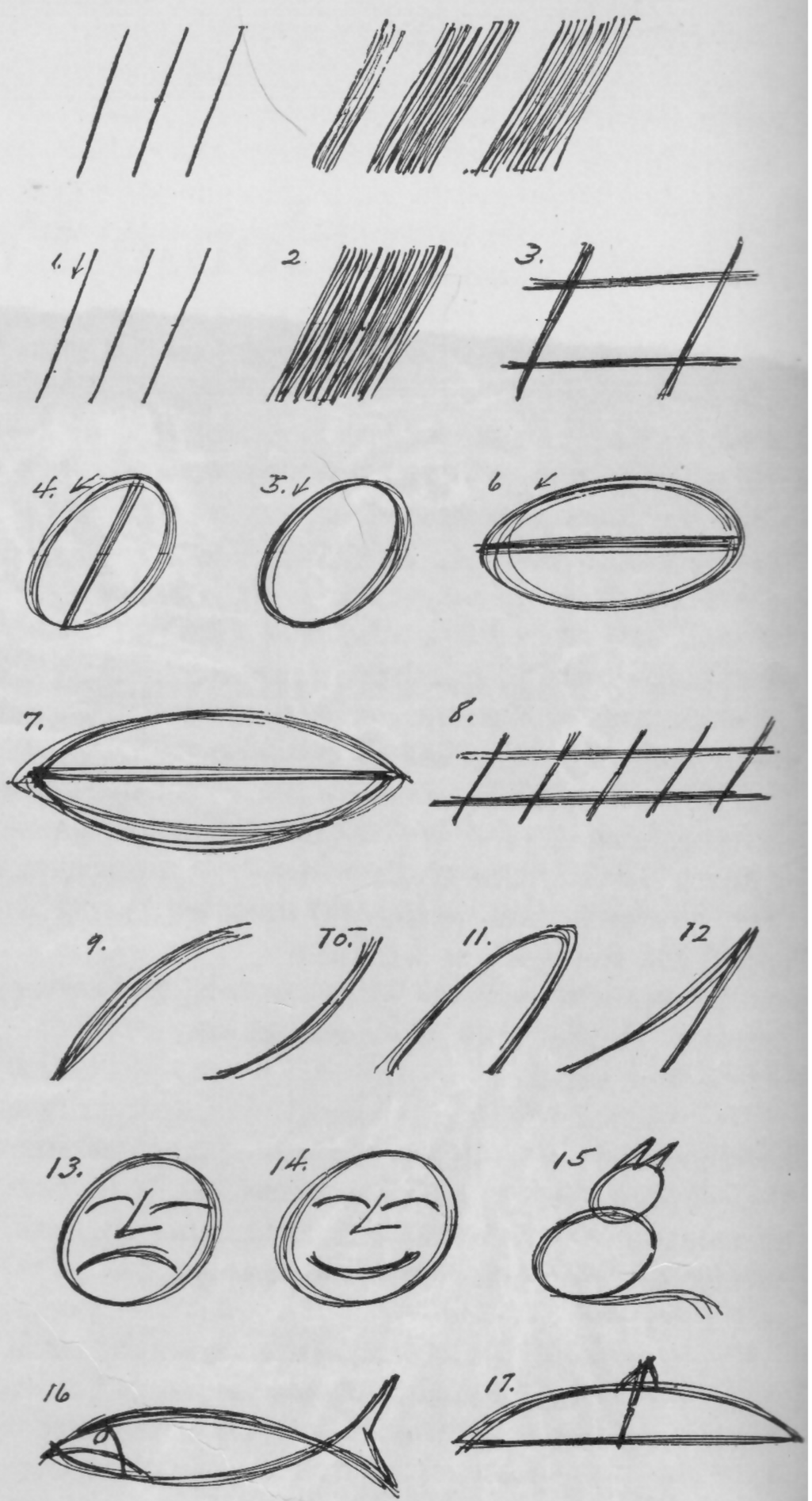
The first thing to do when the child is given chalk, crayon, or pencil to play with is to see that he is shown how to hold it. He should be shown also what it can do on the blackboard or paper, weaving in a nice little story of what the chalk is making.

A word about left-handed children. Only a very few children are naturally left-handed; the majority acquire the habit at this period of their life because of lack of attention and training. For this reason many children enter school left-handed. If the child is well and strong place all writing instruments in the right hand. Tell him that the right hand is for writing. Do it now and stick to it!

When the child wants to mark, draw, print, or write let him use chalk and blackboard, for these are best. Follow these with colored wax crayons and large sheets of unruled paper, and later let him use the large lead pencil with soft black lead and unruled paper. This is the order in which these instruments should be taken up but it is not the essential thing by any means. Use what the child first has to play with.

Chalk and the colored wax crayons should be held lightly between the thumb and the first and second fingers, bringing the unused end of the crayon under the palm of the hand, as shown in the picture on the preceding page.

To get children to hold the crayon or pencil



Beginning Exercises

correctly requires careful explanation and constant attention at first, particularly while the child is beginning to use them in his play. Little children are not able to use long pieces of chalk or crayon. If a blackboard is used see that it is of the right height; that is, with the center of the board at the height of the eyes.

Paper should be large, about ten by twelve inches and unruled. Common newspaper bags or wrapping paper make just as good material as any.

The first exercise to be given for muscular control is the straight line or mark. This, I think, is the *first* mark made by children. The length is limited only by the length of the arm and size of the paper. These marks should be made in a series, as so many sticks or posts, and should be drawn toward the body with a downward pull. A child should be shown the push from the body and then taught how to make his crayon go over the same path in a push and pull movement.

Closely following this is the enclosed surface

or square made by the push and pull and swing back and forth. Get the child interested in doing it with ease by calling the exercise a play game for making a box or rabbit pen or some familiar thing.

The square can not be made fast enough to give proper drill, so the circle or oval should be used. Show how the oval is the square with rounded corners. Go around in the same track and fast enough to keep lines from becoming shaky or weak.

Make all work large and free, with arm raised, using the fingers only for holding crayon or pencil.

We have now a start whereby we are able to build the lines, circles and ovals into all kinds of shapes and forms.

It is not nice, accurate work we should strive for, but ease, correct position and a certain degree of co-ordination of mind and muscle.

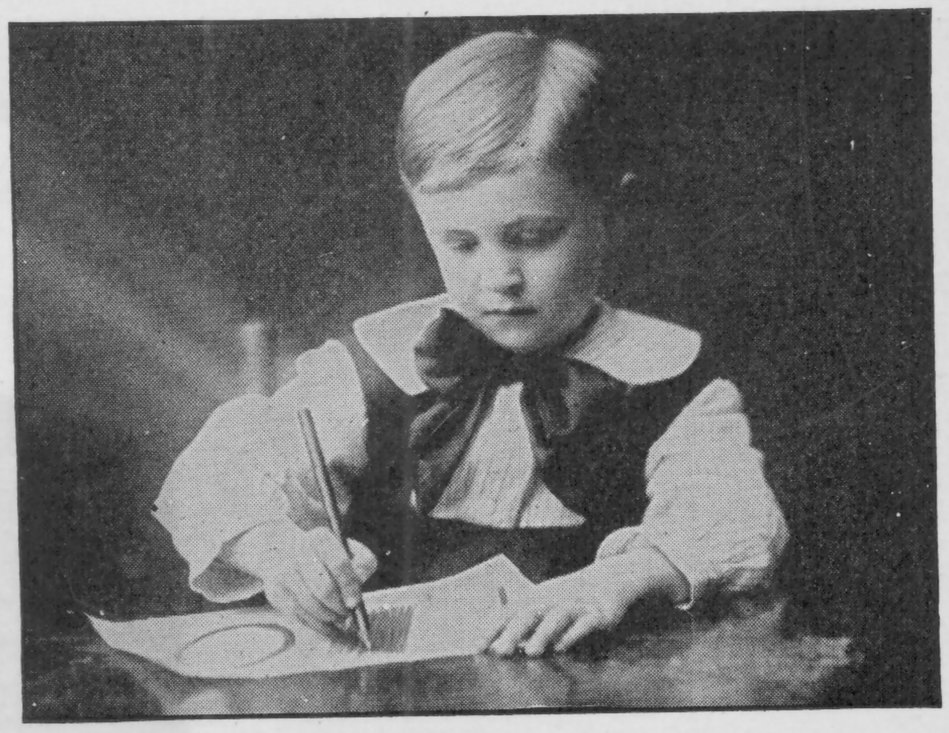
A few suggestions for the work are given in the Beginning Exercises on the opposite page.

I am not supposing the children in the home to have been kept from writing with papa's or mama's pencil, but if they can use the crayons first, so much the better. If not let them use pencil for the work as outlined.

The picture on this page shows the correct position at the table, also correct way of holding pencil and paper.

Notice that the arm is raised, and swings from the shoulder with fingers gliding. Slant the paper that children use, not because it will help the work at this time but because it establishes a correct habit. Use the same drills or exercises for pencil as for crayon.

The size of all movement exercises should gradually decrease, because of the greater control children acquire by the time they are ready to enter the first grade.



Correct Position of Body and Pencil

This training for muscular control and small-sized work continues throughout the first two years in school. It is sometimes taken up as already outlined but is then covered more rapidly. As a result not so much training is received.

Little has as yet been said about learning letters and how to make them.

Children learn the printed capital letter forms readily because they are printed conspicuously in their first picture books. No harm can come from learning the names of those letters which they ask about. For instance, they may say, "What is this letter called?" or, "What is its name?" Children should be told its name. In this way they may learn a great many letters of the alphabet. After the form of a letter has been learned by sight let them take an old newspaper or catalogue and cut out as many of the known ones as they can find.

The parent can help now by cutting out large printed capitals and pasting them on cards and then writing the script letter beside them. Take

Standard Letters.

A B C D E F G H I J K L M

N O P Q R S T U V W X Y Z

a b c d e f g h i j k l m n o p q

r s t u v w x y z 1 2 3 4 5 6 7 8 9 0

first those letters that resemble the script. Capital A is an exception, due to the fact that it always comes first in the children's books.

In order that parents may not use their own individual style in this work, I present as near a standard, universal set of capitals, small letters and figures as can be made at present. These are standard letter forms adopted by the New York City Schools. They are shown on the preceding page.

These cards of the printed and script forms which have been made by the parents are not merely to be looked at, but the child should use his fingers to trace the letters with one continuous rapid movement until he wants to try it on the blackboard or paper.

It is a good time now to make a number of these letters for him to trace over. See that these letters are large and that tracing is made freely and in as good position as possible. This kind of work can be carried on with profit in the home until the third grade, adding the small script letters and short words.

The writing of the first grade in school consists of:—first, teaching a correct position as has been shown; second, developing and training the muscles; third, reducing the size of the exercises and letters so as to get work on ruled spaces of three-eighths to one-half inch as shown in figure 10, in the illustration on this page.

The size of the exercises is reduced in easy stages by folding the paper lengthwise until each fold is about the size of two ruled spaces.

Small letters of the alphabet should receive a great deal of attention as they are used in word building in the teaching of reading.

Retracing letters and words on the blackboard and on paper is one of the great helps.

The children should know all script forms for the small letters and be able to combine them into words and sentences by the end of the first year in school.

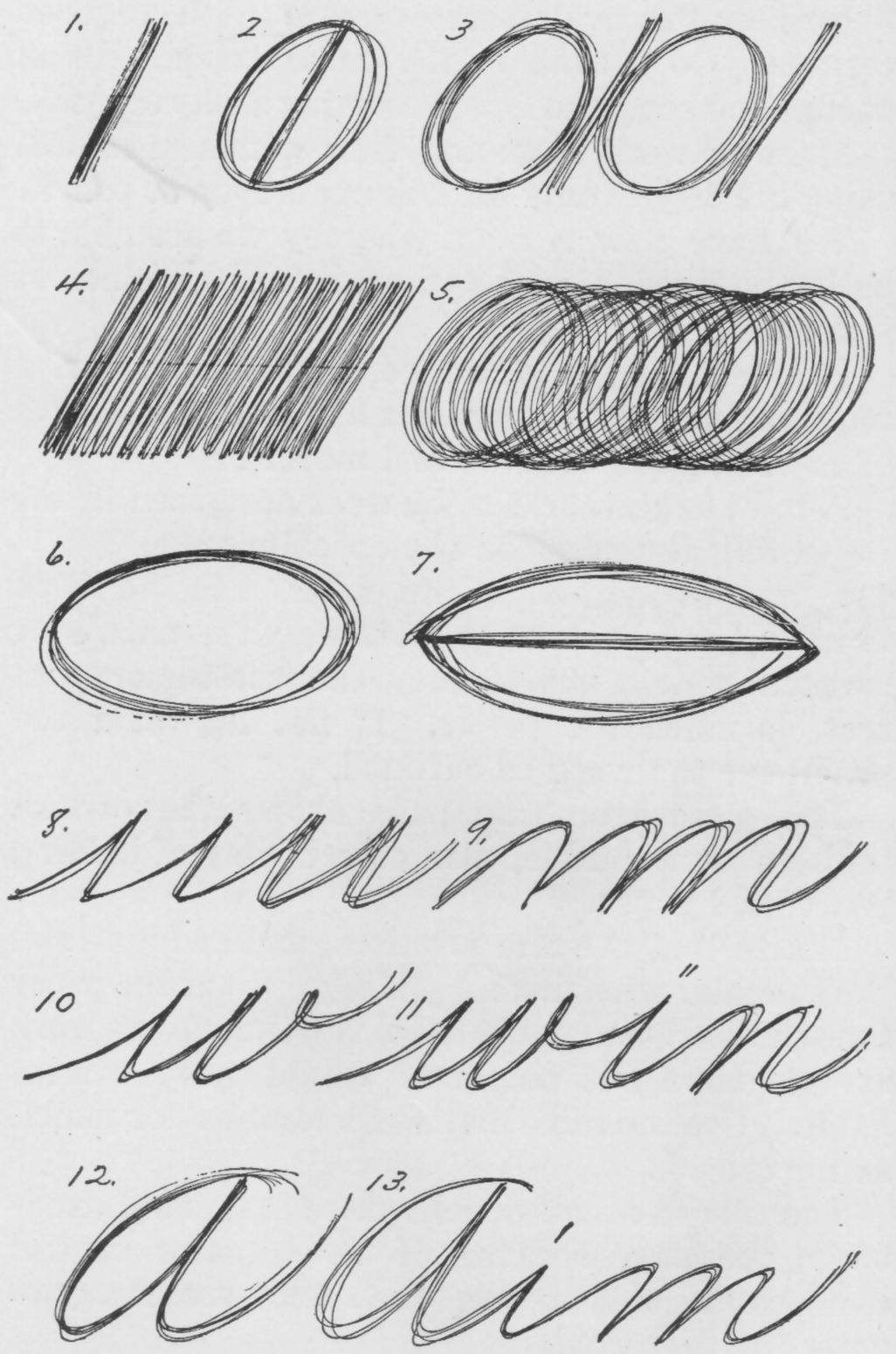
Parents should keep in mind that very little writing is best for the first grade but that correct position of the hands, body and paper is the essential habit to be formed for future use.

The work of the second year is not so very different from that of the first. The capital letters receive more study and practice, small letters are reviewed, and more work in word and sentence writing is given.

The writing is usually kept one and two spaces in size for nearly the whole year, although in many schools pen and ink and smaller-sized letters and exercises are taken up for the last few months. The work is the same as is given during the first of the third year's work.

Parents should see to it that all letters are large and well formed, and made with ease and greater skill in using the arm.

Call attention to the fact that the letters *l, h, b, f,* are as tall as capitals; that *t, d, p,* are a little shorter; and that the letters *i, u, n, m, v, w, e, o, a, s, r, c,* are the smallest and of the same height. The letters *j, y, g, z, q,* are made below the line a short distance and cross on the line.



Drills and Exercises for First and Second Years

Watch children's home writing and written work for school to see that it does not become too small or cramped. Keep the letters, words, and sentences from becoming crowded and poorly formed. Correct position always to be maintained.

The teaching of writing beginning with the third year in school deals more with the habits and style of adult writing. The size of the letters is brought down so that the capital letters occupy one space three-eighths of an inch high, and the small letters *i, u, m,* etc., one-half or one-third of such space, as the school may demand.

The most decided change in schools where arm movement is not taken up in the first year, is in taking up the use of pen and ink and in lowering the muscle of the forearm down on the desk or table for the writing with arm or muscular movement. The change is easily and quickly made if care is used to show how, as no bad habits have to be overcome.

What is Muscular Arm Movement Writing?

Correct Position of Body, Arms, Pen and Paper for Arm Movement Writing

Muscular or Arm Movement in writing is not a new style of letter forms but simply a new way of producing them. The arm rests on the large fleshy part of the forearm and on the side of the little and third finger nails, with the wrist and side of the hand free, arm relaxed, and rotating on this soft pad of the muscle when in the act of writing. The power used in forming the words comes from the muscles of the upper arm and shoulder. The fingers have a very slight action. Their main duty is to hold the pen or pencil.

The position gives great freedom but unless enough practice is given it results in a poor scrawl. Thoughtful practice is the watchword. It is not only necessary to watch the result of the arm movement but to ascertain what habits the arm is getting into in producing that result.

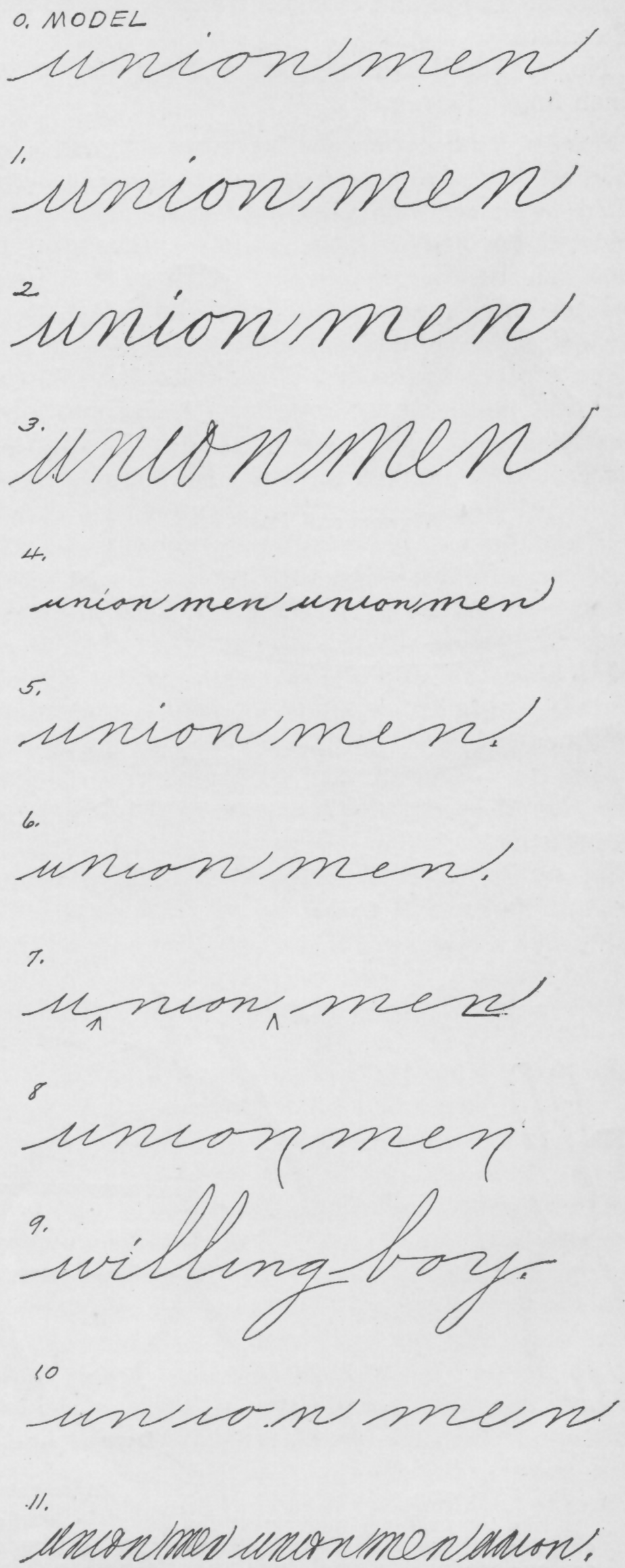
This is the idea. If children acquire these habits by use in all written work as they pass from grade to grade they will leave school with nearly an automatic way of writing.

The same exercises that are given in illustration No. 5 are still used for drill, but the work is not over two spaces high. When skill is shown in the use of the pen and light, free exercises are the result, letters in groups, words and sentences may be used as drills.

It is not the aim of the third, fourth and fifth grades to turn out perfect work but to see that correct position and free movement is in use whenever the child writes. This is hard because of the lapse into the use of the fingers through carelessness and because of lack of close supervision on the part of the school and parents.

There should be an improvement from year to year in the slant, size and spacing of the writing. All of this receives greater attention in the upper grades when children have learned to use the writing machinery.

The parents should see to it that time is taken at home for practice on movement drills, words and sentences. Good materials for work should



Common Mistakes

be furnished at home—paper with a good smooth surface, pen holders of a fair diameter, made of wood with cork or rubber tips, pens with a medium fine point not too stiff nor too elastic, and ink that is black and flows freely from the pen.

Parents should get in the habit of looking over the writing of their children having in mind particularly the following points for observation and correction.

No. 1. Slow and shaky movement.

No. 2. Writing drawn out and heavy.

No. 3. Large and careless writing, due to lack of control.

No. 4. Small and cramped writing, due to too much finger movement.

No. 5. No uniformity in slant.

No. 6. No uniformity in height.

No. 7. No uniformity in spacing between down strokes in letters and words.

No. 8. Careless finishing of words.

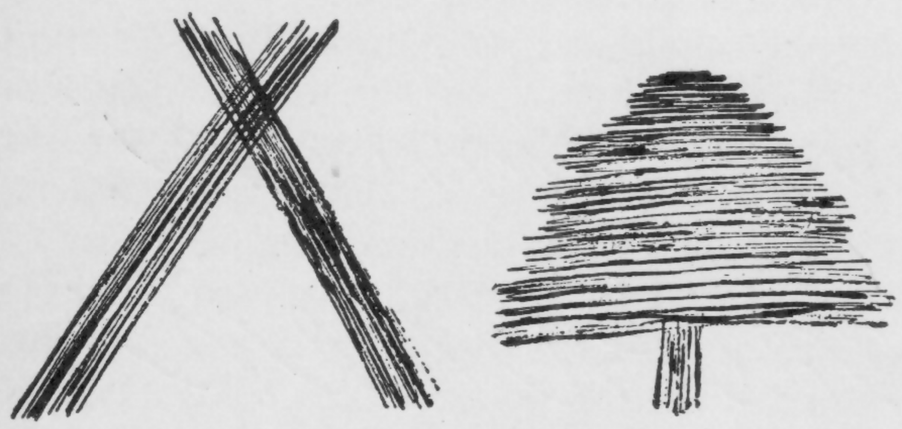
No. 9. Poorly made long loop letters.

No. 10. Pen raised too often.

No. 11. Illegible writing.

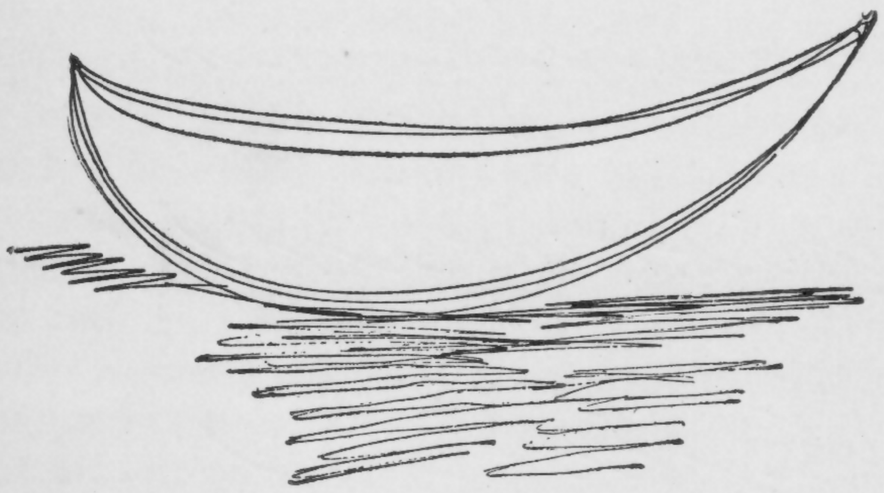
Last but most important, the correct position and freedom and ease in all work.

The best and only way to help children to improve in writing is for parents to take an interest in writing, cooperating with the school in knowing and demanding good work at home and never saying or doing anything that will cause the children to underestimate the great importance and value of good writing.



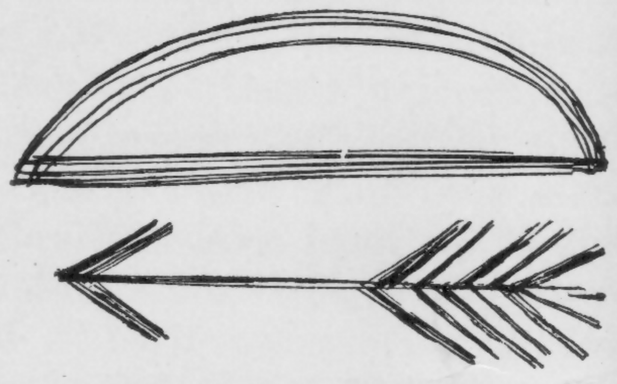
Wigwam and Tree

Rainbow

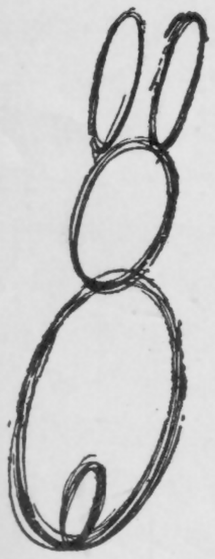


Canoe

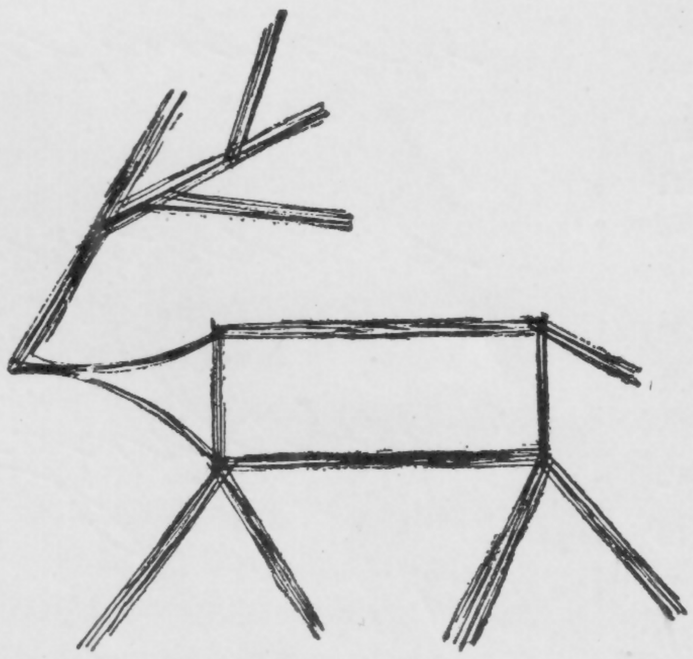
Moon



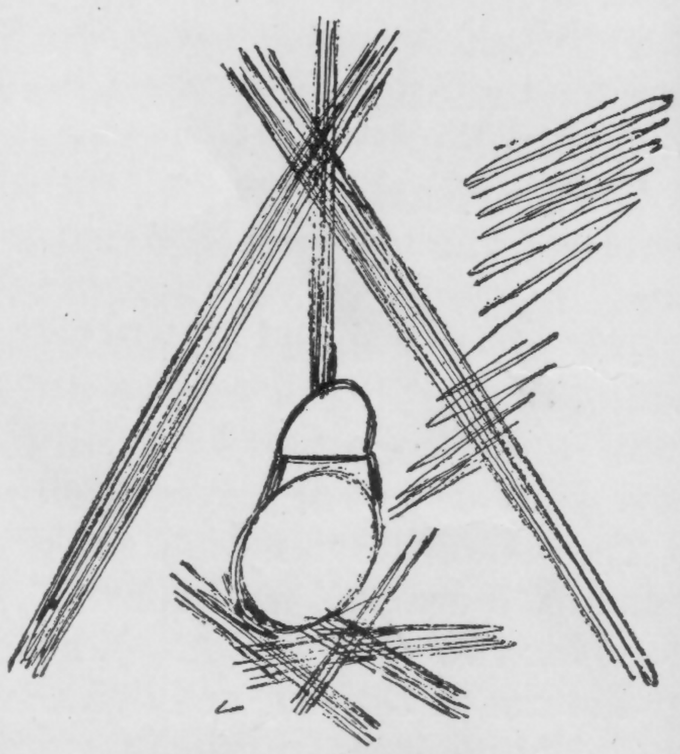
Bow and Arrow



Rabbit



Deer



Fire to Cook the Deer

A Child's Representation of the Story of Hiawatha

Use the push-pull movement for the sides of the wigwams and the trunk of the tree. Use the straight line exercise for the top of the tree and swinging movements for the rainbow. These pictures are suggestive of what can be done in the way of working out stories to develop Muscular Movement Penmanship after lines, circles and ovals have been studied.—*Lelah M. Kinney.*

Things to Make

Teaching Children to Cut

CHILDREN love to cut. There is hardly anything they long so to get hold of as the bright sharp scissors, which, in most homes, are kept high out of reach. Perhaps some of this intense longing is due partly to the fact that scissors are contraband articles, but I think more of it is because children have an inherent desire to cut.

Experience has shown that cutting is one of the most valuable and most interesting kinds of busy work. It trains both fingers and eyes, and pleases the mind and the imagination. It is a wonderful help to the busy mother.

There are two objections which are often urged against the use of scissors; one is the danger of the sharp points, and the other is the damage children are inclined to inflict on objects. The first objection can be met by using the broad, blunt-pointed scissors which can be purchased at any five-and-ten-cent store; and the second becomes nil in the course of teaching the right way to cut and providing proper things to cut. Children will not cut for the sake of being destructive, if once they have been taught to be constructive. Most of the destructive cutting is done on the sly—when the wild joy of having at last laid hold of the forbidden scissors must have a vent.

It needs only practice to make good cuttings when once a few simple rules are learned. Much may be learned by just watching the mother cut. First show the child how to hold the scissors. The early attempts usually show the wrong fingers in the hole, or the scissors turned flat instead of sideways. This makes the paper bend instead of cut and is the cause of much impatience on the part of children before they understand what the matter is. Once understood, it is soon mastered. The next step is to teach them to push the paper well into the blades, to open the scissors wide and cut in long strokes. Nine children out of ten begin by cutting with the very points of the scissors and with tiny strokes, which gives a ragged look to the edges. There will be some difficulty at first with the wide, open cutting in keeping the scissors from "chewing" the paper. Success comes only from practice, but the triumphant joy of the child when he makes his first long, clean cut will be worth the pains of teaching.

Children should next learn to cut along straight lines. The children may draw their own lines or use ruled paper, or be given sheets of newspaper and instructed to follow the black lines around advertisements or between the columns. Playing that the scissors are a trolley-car, and the lines are the track, and seeing how long the small motorman can keep his car from running off the track, makes a good game of the exercise, and gives the children the perseverance to stick to cutting lines when they want to be cutting pictures. When drawn lines are fairly well mastered, try cutting on folded lines. A fairly stiff paper cuts easier than a soft one like a newspaper. Circles are a good pattern to take up next, and this variety is almost like a new occupation. An object lesson should be given by the mother, showing that in cutting one turns the circle into the scissors. Little children usually begin by trying to bend their hands around the circle so that they are trying to cut upside down at the last. It is a help in this stage of the practice to call the scissors a fish with his mouth open and they are to play that they are feeding him. This gives them the idea of turning the circle.

In all these preliminary stages of practice, care must be taken not to make the cutting periods too long. Cutting is a pretty severe strain on both eye and hand muscles, and two short periods accomplish more than one long one. When children have mastered these three lessons, how to hold the scissors, cutting along straight lines and cutting circles, they are ready to try almost anything in the line of pictures. Oh, the joys before them in cutting paper dolls from fashion sheets; flowers, furniture, toys, jewelry from catalogues; pictures from magazines and papers; all sorts of conventional designs from odds and ends of wallpaper; letters and words from handbills! The supply is almost endless, and no expense is attached.

It is surprising to children to find how much they

can cut free hand. With a pattern set up before them, they learn to follow the outline by eye.

Strings of paper dolls, butterflies and birds, fruits, strings of bells, and various other patterns, will be productive of much amusement. If children show a great desire to "snip" paper into bits teach them to turn that desire into use and cut what we used to call "registers." Fold the paper into a number of folds and tell pupils to snip out bits here and there. When the paper is unfolded many pretty results will be obtained. On page 344 are models of snow crystals that may be cut by this method. Throughout the book will be found designs which may be used for cutting. The child may trace them if he is able, or else the mother may trace the pictures and the child may cut them out. —*Evelyn L. Taintor.*

Working in Wood

Scissors and paste may do for the younger children, but boys want to make real things, out of wood and other materials. We have included quite a number of things to make, giving working drawings and all dimensions, as well as cuts showing the completed toys. Boys will enjoy making these things, but should have a place fitted up with a bench and tools, where they can work without annoying other members of the family. If properly encouraged, boys will soon develop a skill with tools which will make them very handy around the house and garden, besides giving them valuable mechanical training. Below are suggested the tools necessary to have, the kind of wood which may be used, and some ideas as to manipulation.

Basswood strips may be secured at five cents a square foot; but if funds are low, cigar boxes may be taken apart and utilized. In those sections of the country where basswood cannot easily be obtained, poplar or pine may be substituted.

Each child should be provided with a scroll saw. A very satisfactory style, eight inches deep, with one dozen saw blades, can be secured for thirty-five cents. Children very quickly break the blades at first, but a little practice develops skill, and the breakage decreases rapidly.

Other required tools may be purchased from time to time. A hammer, and small iron anvil or some substitute for it can probably be secured or a substitute found. A list of necessary tools, with the estimated cost of each, is given:

Flat nose pliers,	$.20
Side cutting pliers,	.46
Handled brad awl,	.05
Brace,	.50
Forstner auger bit for $\frac{1}{4}''$ brace,	.55
$\frac{1}{2}$ lb. $\frac{1}{2}''$ brads,	.10
$\frac{1}{2}$ lb. bank pins No. I,	.10
$\frac{1}{2}$ lb. bank pins No. II,	.10
Sandpaper No. II and III, per sheet,	.01
$\frac{1}{4}''$ round file,	.10
$\frac{1}{4}''$ dowel sticks, 3 ft. length,	.05
$\frac{3}{16}''$ basswood, per square foot,	.05
	$2.27

There are a few general directions which the parent unfamiliar with bench work will wish to bear in mind. Patterns may either be traced on the wood with carbon paper, or traced by drawing the outline with a sharp pencil around the edge of a carefully cut cardboard pattern. The grain of the wood is determined by the wood fibers, straight-grained wood having the fibers in straight lines. As the wood always bears greater strain *with* the grain, rather than *across* it, great care must be exercised in planning the design on the wood to see that as many narrow projections as possible run *with* the grain.

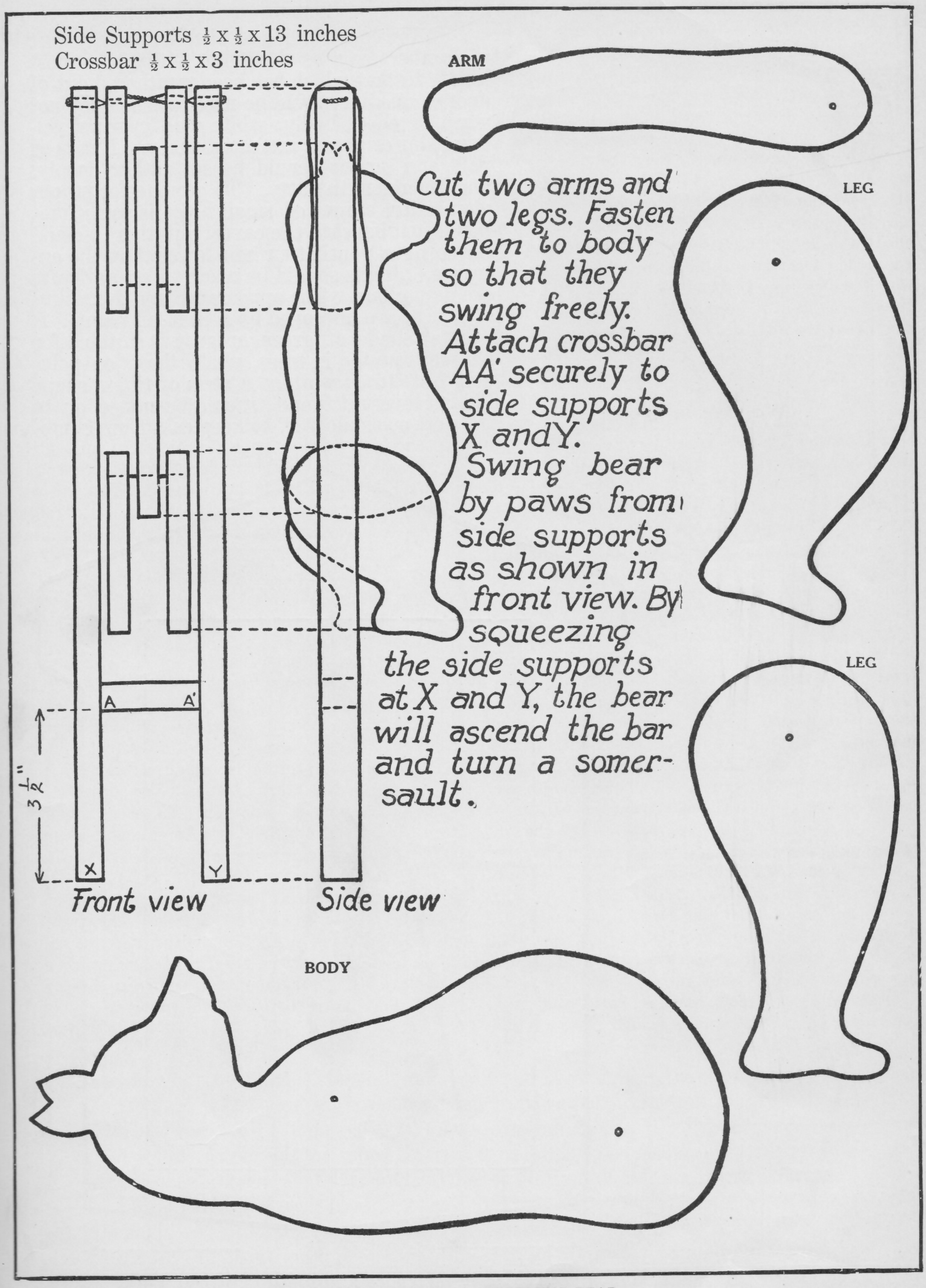
Accuracy must be insisted upon, in tracing as well as in sawing. Let the boy work carefully, step by step, and wait for his work to be approved before going ahead. Sandpaper is used to secure a better finish, never to patch up defects.

The sawing position is a standing position, chest raised and shoulders back, so as to secure steadiness of nerves and muscles. The wood must rest firmly upon the bench, at a height which enables the boy to stand erect, and yet hold and see his work easily.

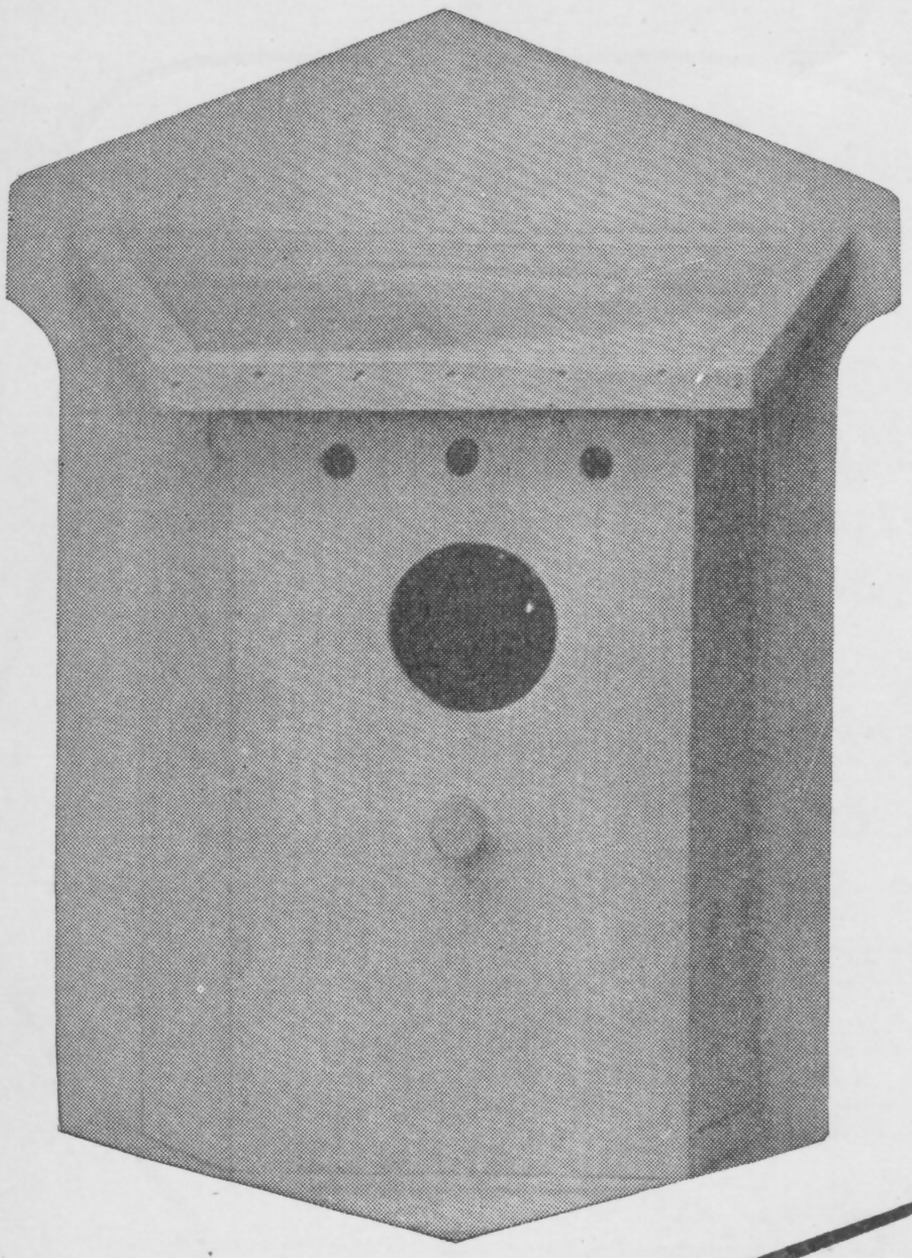
The saw blade is placed in the frame with the teeth pointing toward the handle. The frame is held in a vertical position, with little pressure of the blade against the wood. In turning corners, remove all pressure, merely moving the saw up and down until the turn comes easily.

—*Martha Feller King.*

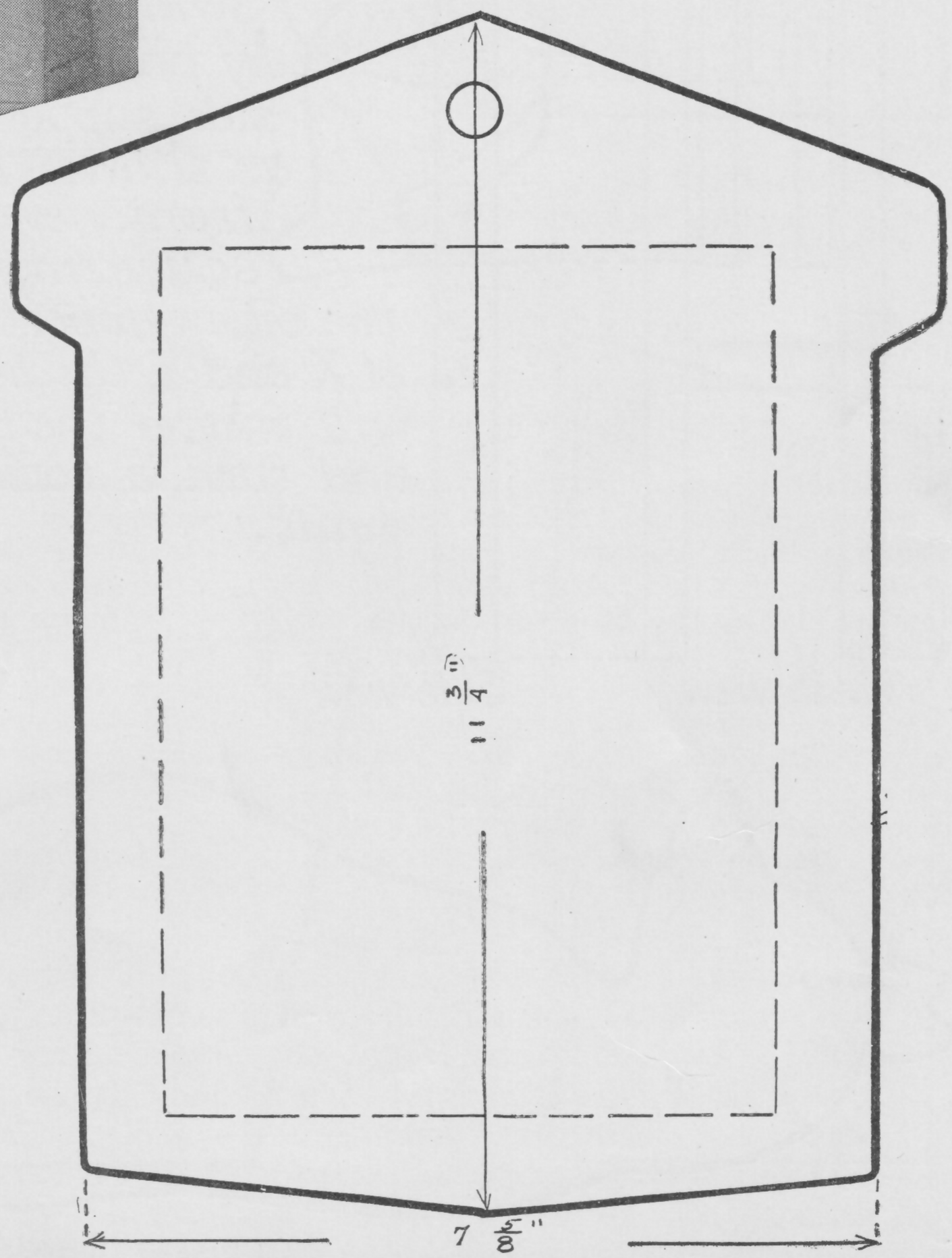
On the following pages will be found many ideas for children to work out for themselves in paper, cardboard or light wood. It is hoped that many times these designs will solve the familiar question, "What shall I do now?" It will add much to the pleasure of children if a small room in the house can be set apart as a workroom, or sometimes it is wisest to give over certain space in the stable or garage. The problems in hand work offered here will suit many ages and will fit in admirably with manual work taught at school. The plans and suggestions given on this and the preceding page, together with the directions included with each design, make clear the purpose and method of the work.



PATTERNS FOR A PERFORMING BEAR



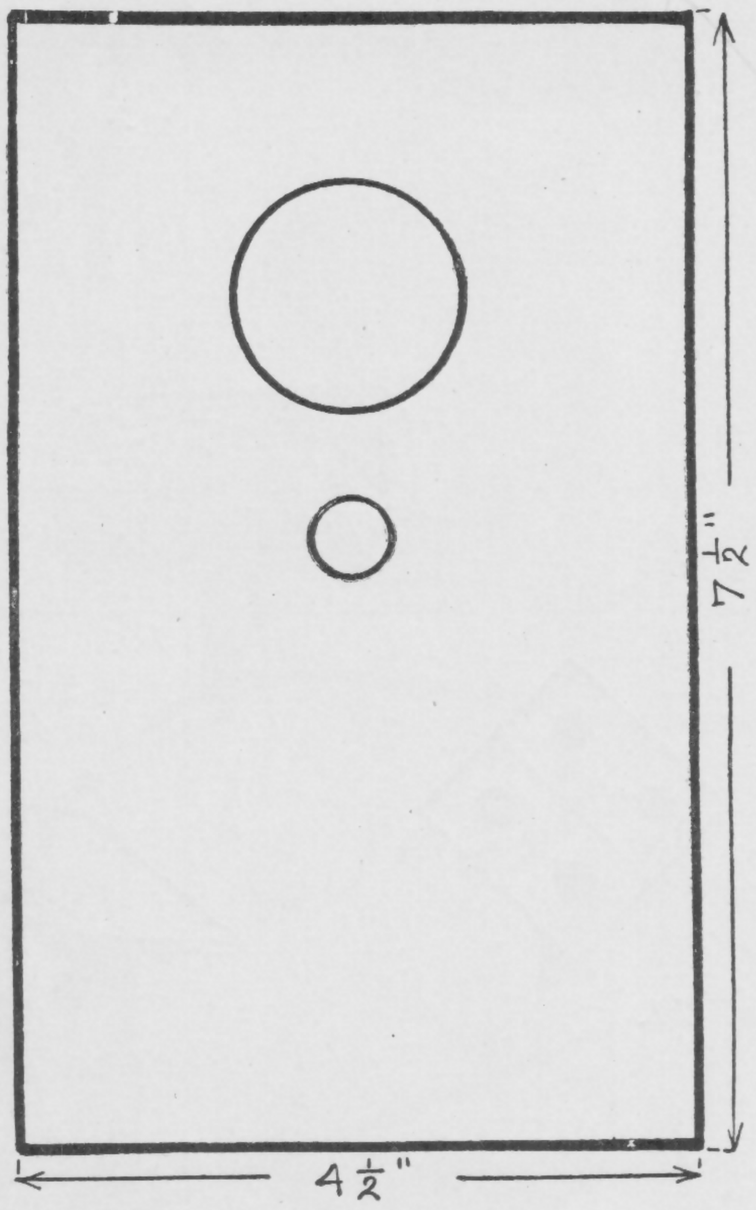
In the construction of bird houses any sort of lumber may be used, but birds take most kindly to that which has been weathered out of doors. A kind should be used which does not warp or check badly; white pine, cypress, yellow cedar or poplar are satisfactory. Heads of nails and screws should be set rather deeply, and covered with putty. To provide for proper ventilation a row of small holes is sometimes bored just beneath the eaves, but there should never be a ventilating hole lower than the entrance. Joints should be made tight, as drafts are dangerous. The appearance and durability of houses are improved by a coat of paint. A neutral shade of green or gray is suitable for houses mounted in trees, while those on poles may be painted white. A strip of tin, in shape like an inverted funnel, should be nailed on to the post or small tree, to keep cats from climbing up.



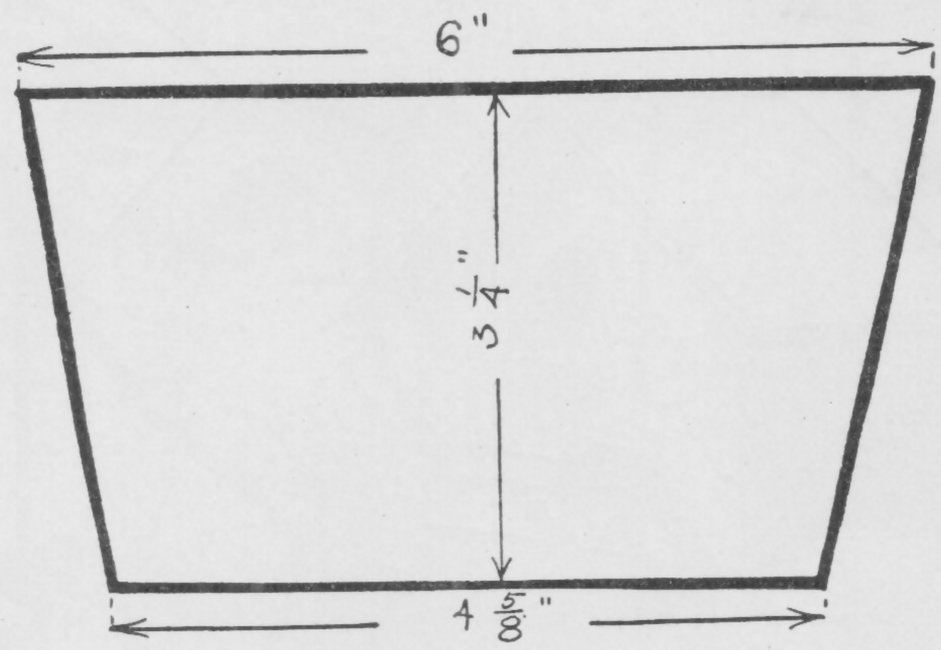
Back, with dotted lines to show position of front of house.

A HOUSE FOR MRS. BLUEBIRD

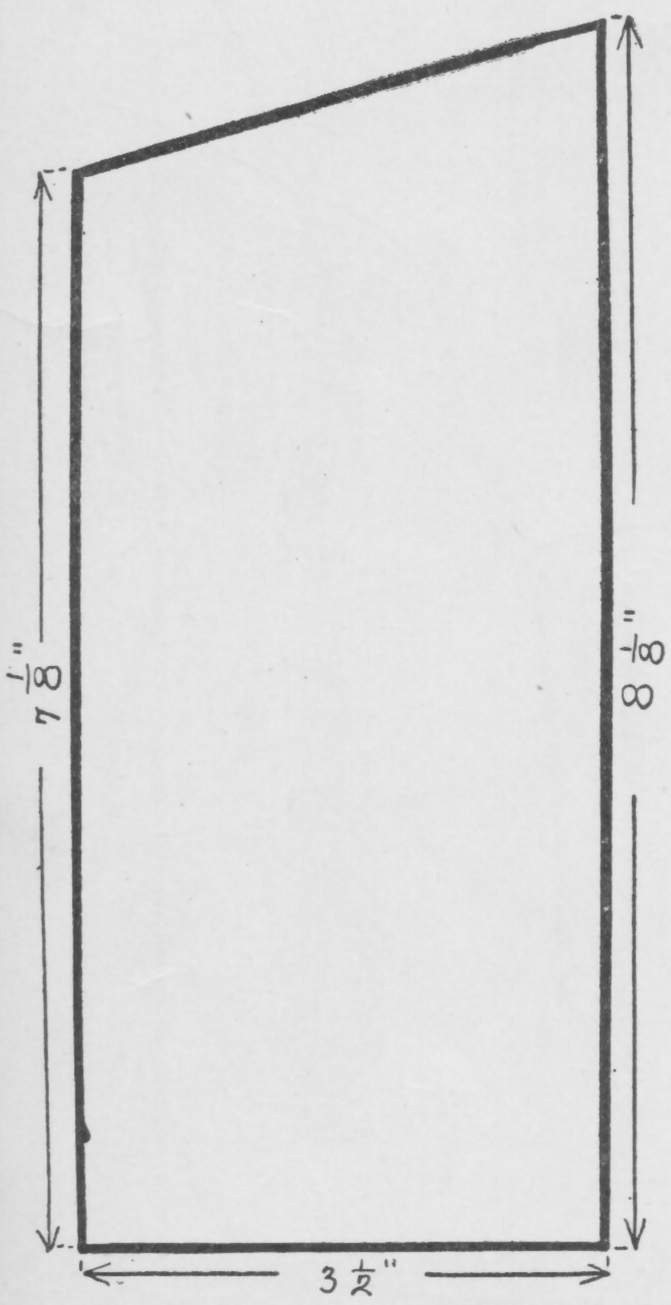
The bluebird house on these pages is made of sawn lumber, and should be put together with screws. The floor or front should be removable, to provide for an annual spring house-cleaning. The drawings are exactly one-half the size of the completed house. First make the back, and mark out the dotted lines. These show where the front is to be attached. There will be two side pieces, of the same dimensions. Prepare them next. Then make the bottom, and fasten to the side pieces. Make and insert the front. Then, through holes already prepared on the dotted lines, screw the side and bottom pieces to the back piece, inserting the screws from the rear of the back piece. Screw on the top and the house is ready to be painted and set up.



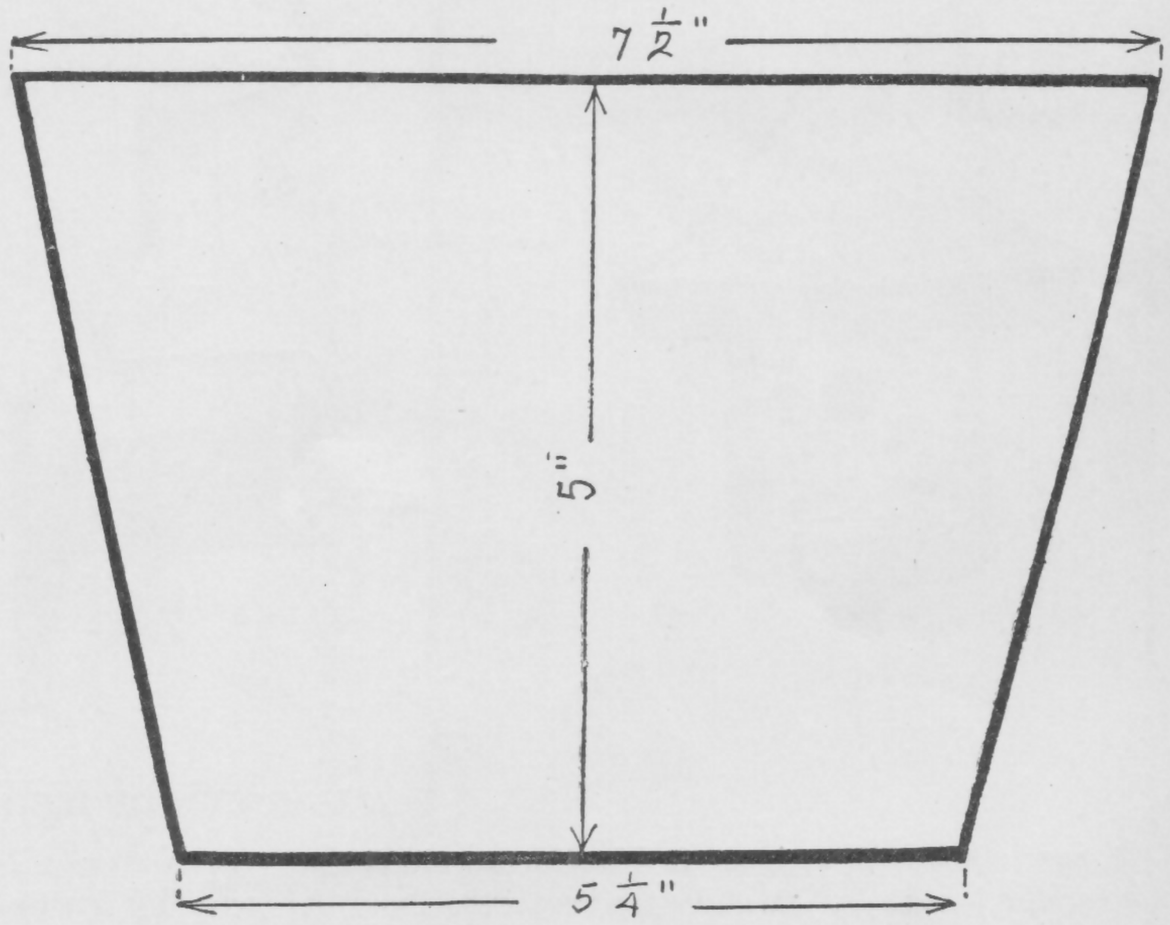
FRONT



BOTTOM

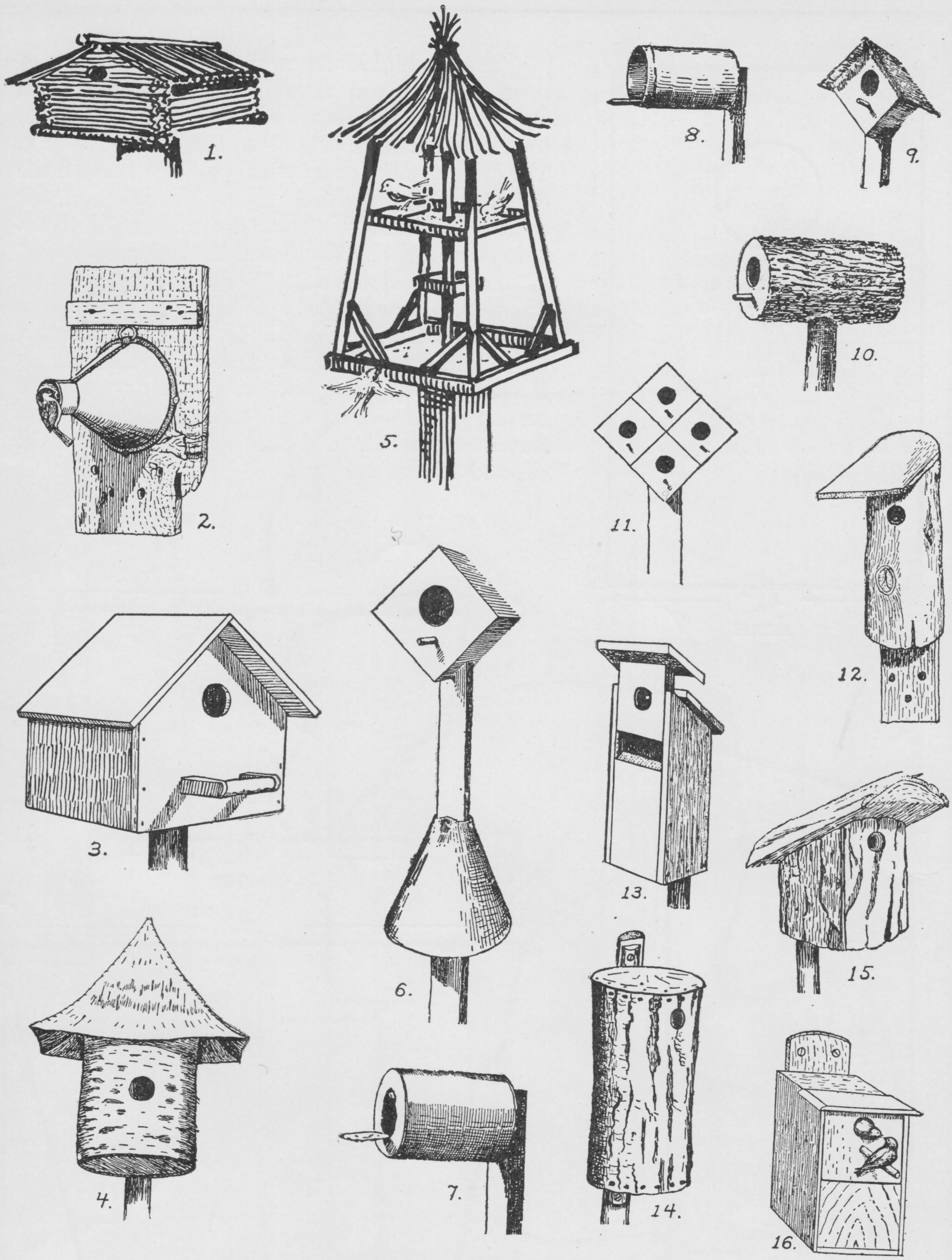


SIDE



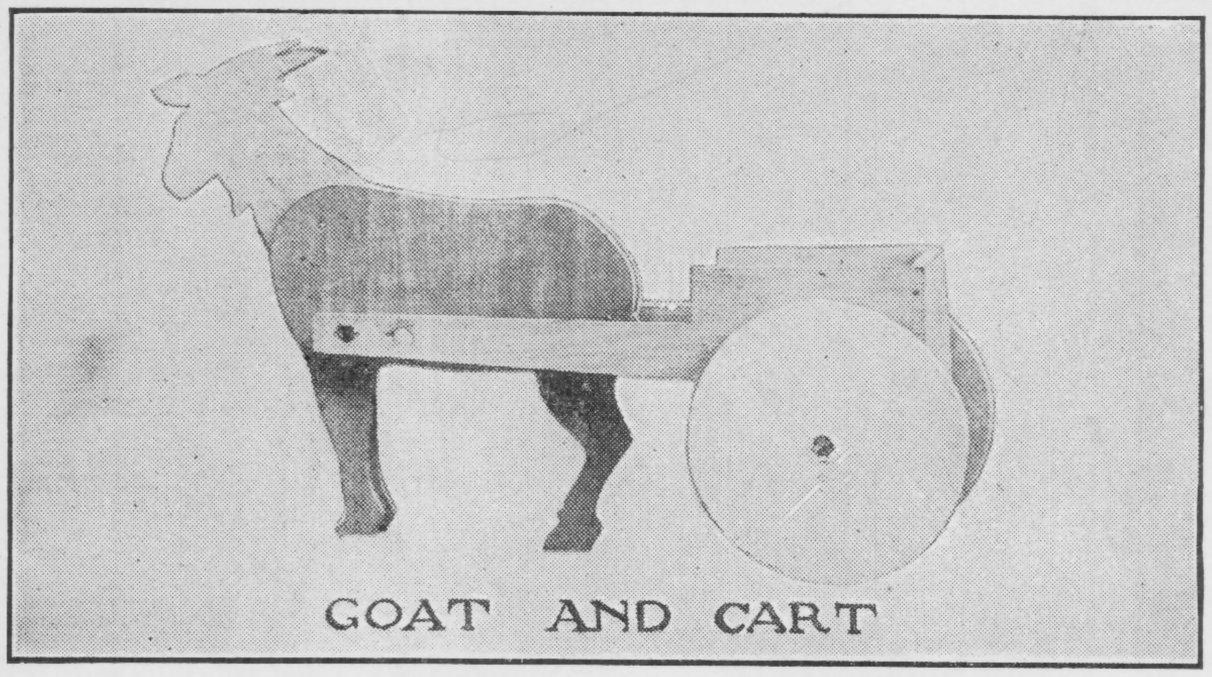
TOP

PATTERNS FOR BLUEBIRD'S HOUSE

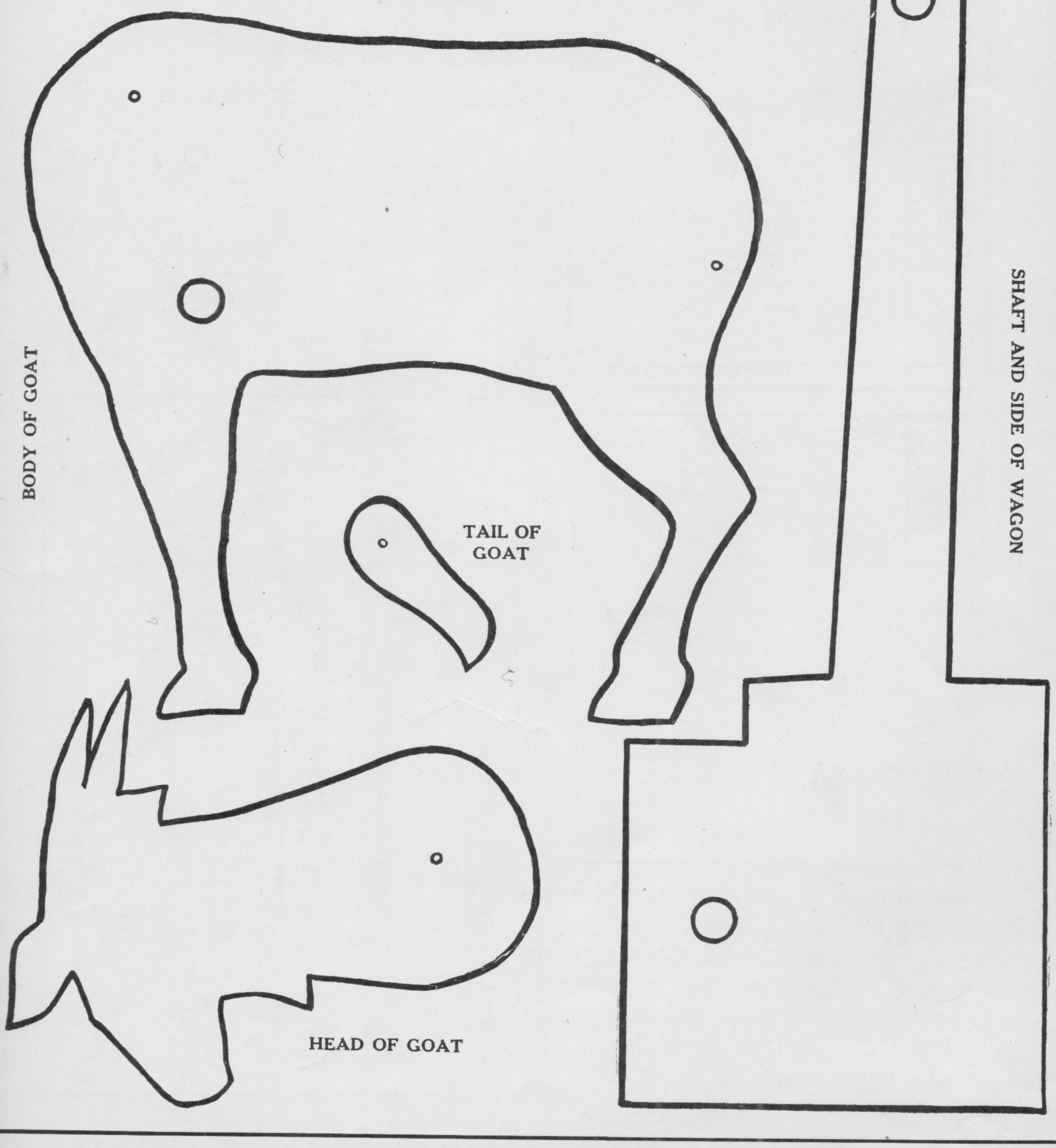


A VARIETY OF BIRD HOUSES

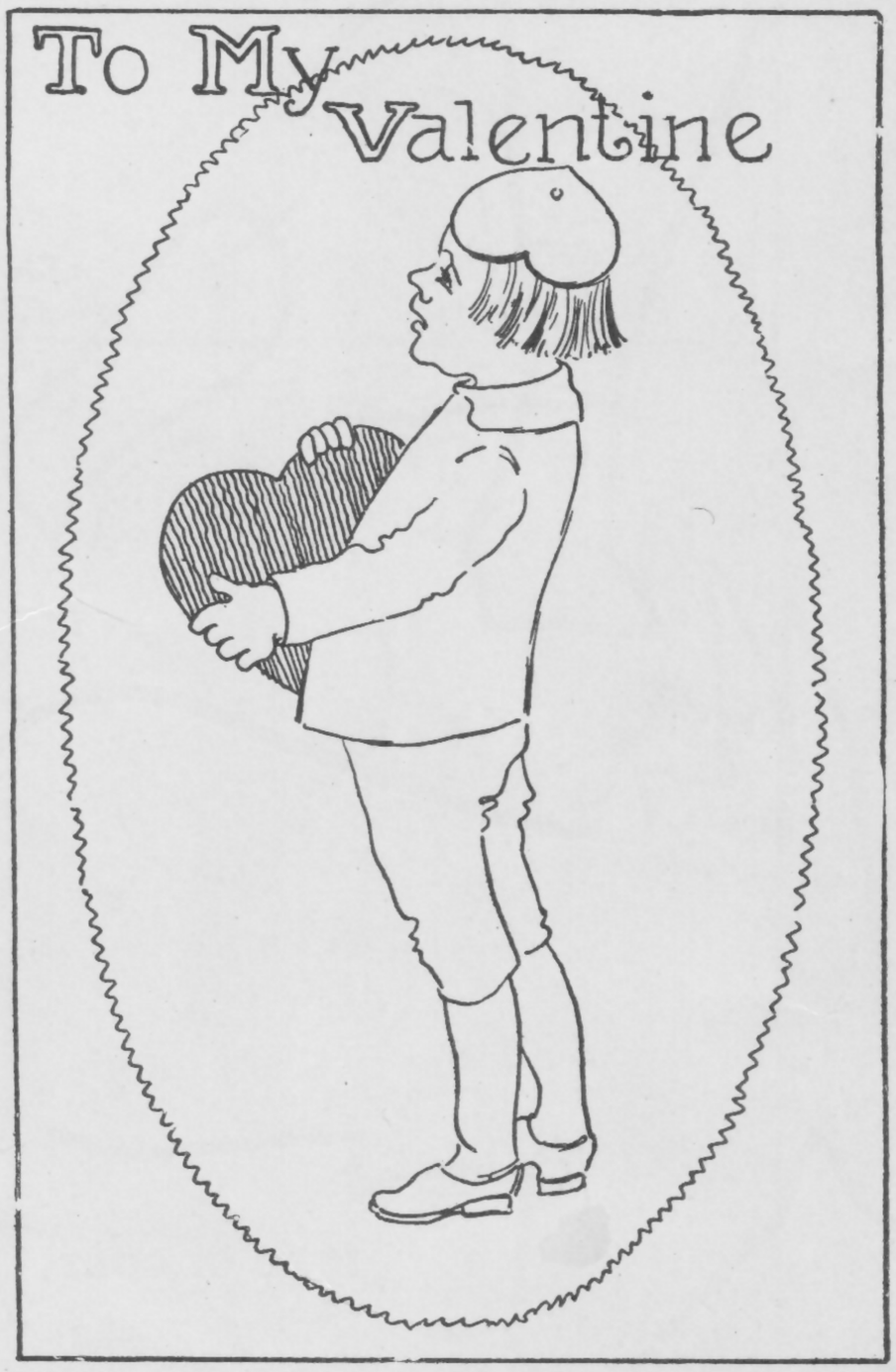
1. A rustic house of twigs. 2. Use for an old funnel. 3. A simple box, with perch. 4. A house of birch bark. 5. A food shelter for the birds. 6. A house protected from the cats by strips of tin. 7. New use for a tin can. 8 and 9. Other forms of tin can houses. 10. House in a hollowed log. 11. A simple purple martin house. 12. Bluebird house from a slab. 13. A bluebird house that opens. 14. A bluebird house of bark. 15. Another house of slabs. 16. A well built bluebird house. with top removable to clean.



Diameter of Wheel -	$3\frac{1}{2}$ inches
Back of Wagon - -	$2 \times 2\frac{7}{8}$ inches
Bottom - - -	$2 \times 2\frac{3}{8}$ inches
Dashboard - -	$2 \times 1\frac{1}{4}$ inches
Seat - - -	$2 \times 1\frac{3}{8}$ inches

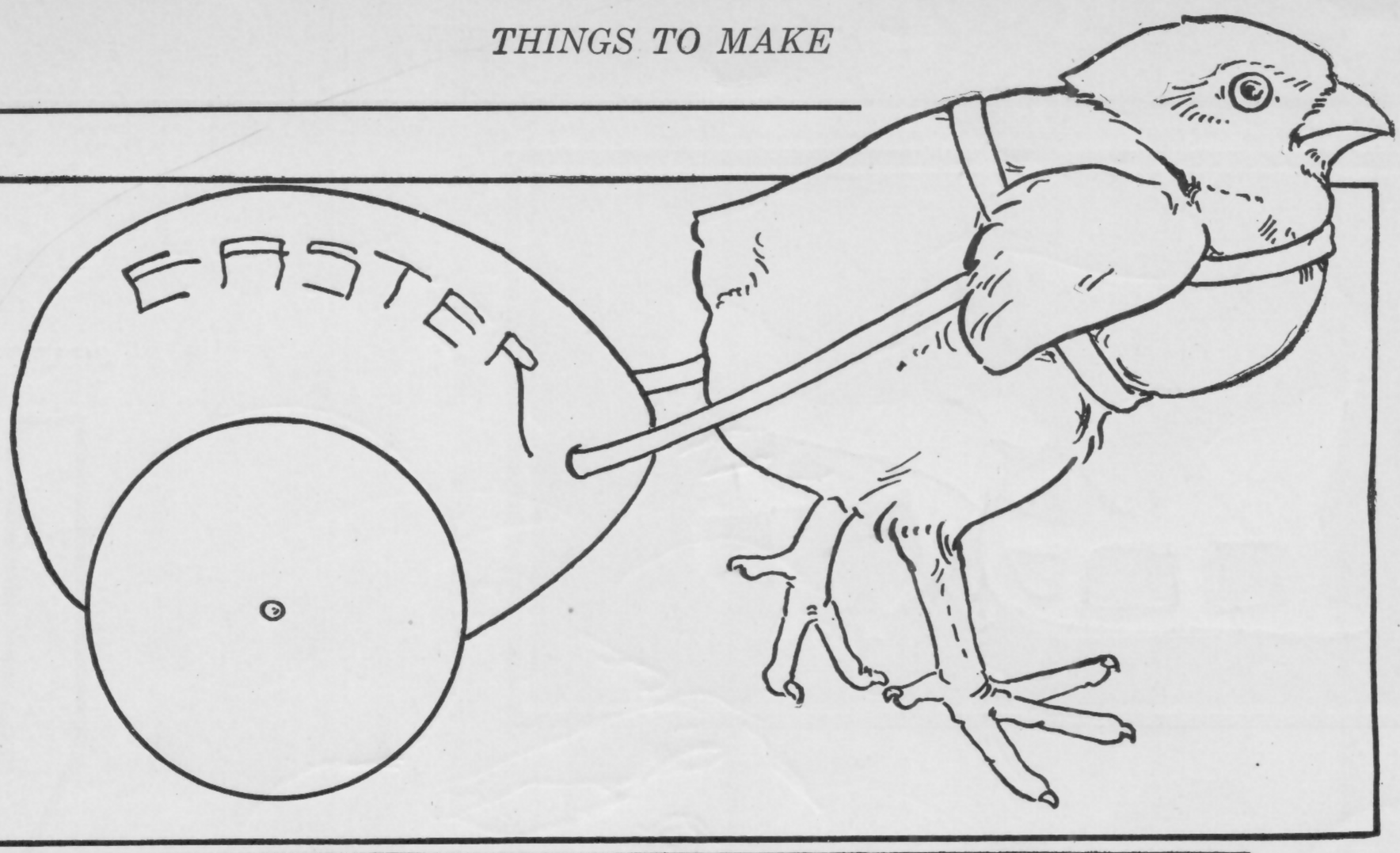


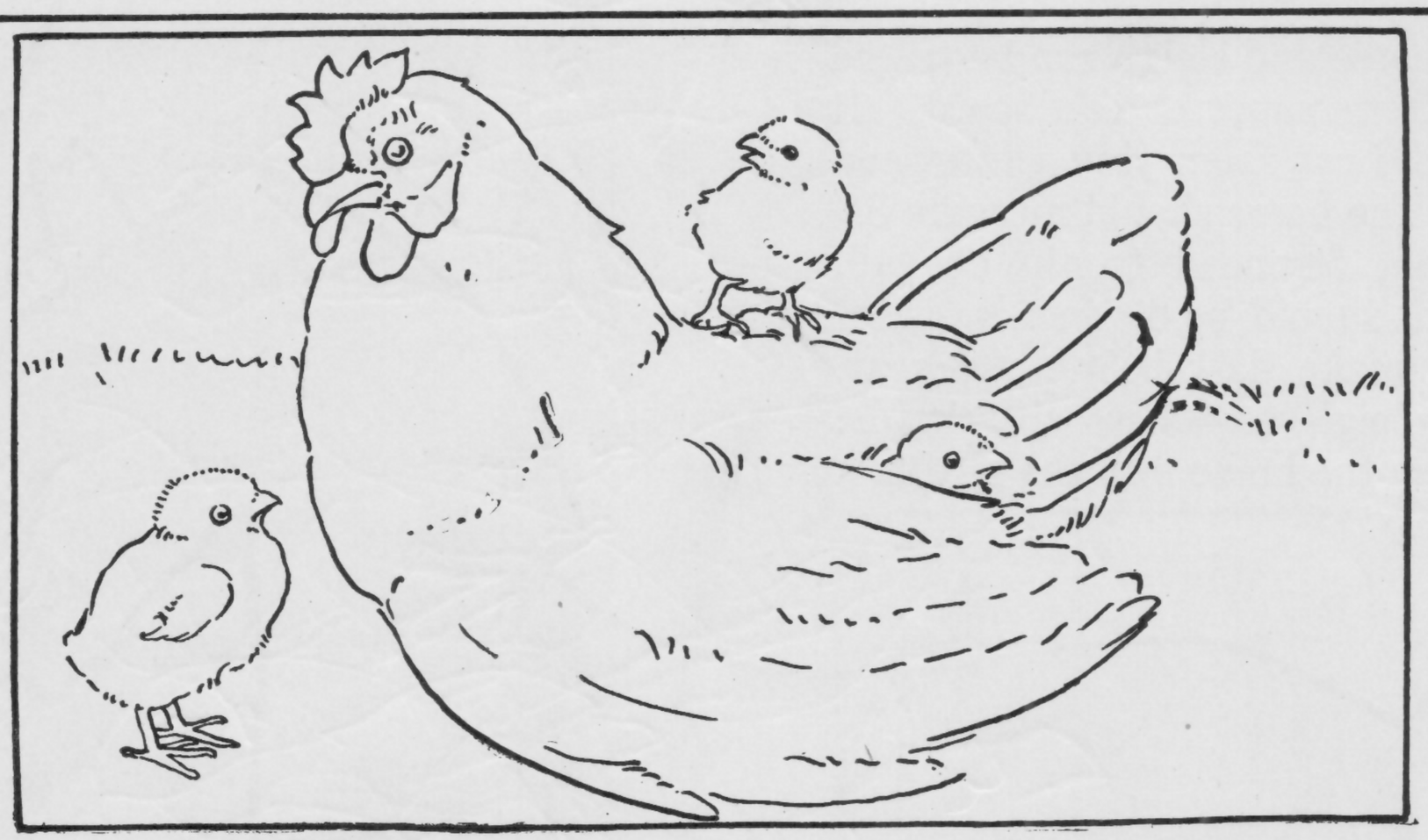
GOAT AND CART

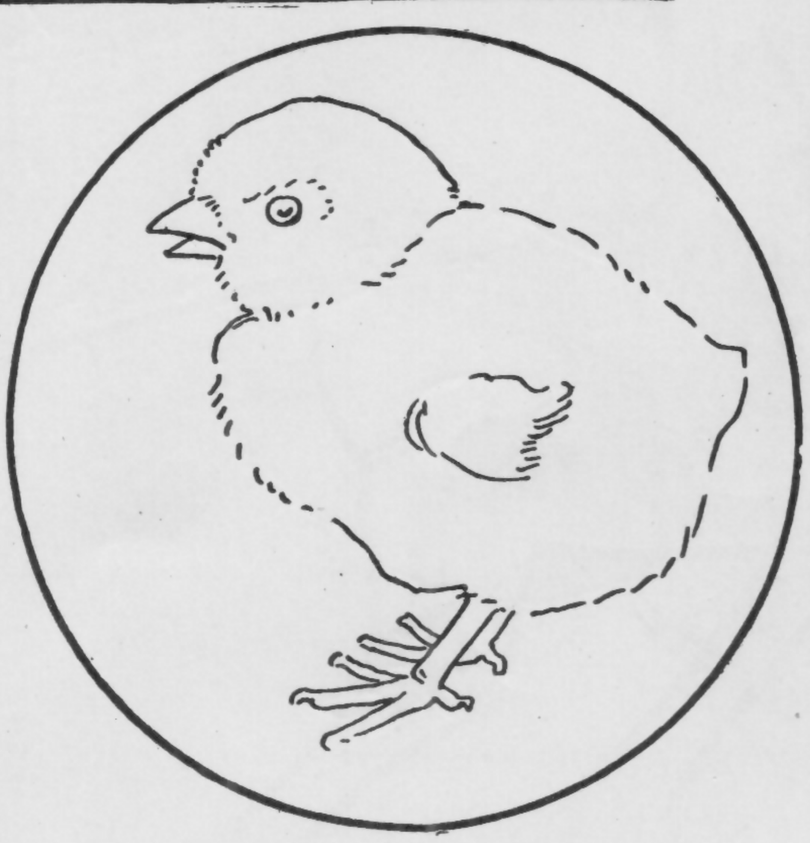


February 14 is the day on which we give tokens of love. It will be a joy to make your valentines instead of buying them at the store. Supply yourself with water color paper and water color paints or crayons. Trace the designs, transfer to the water color paper and color. Put each valentine in an envelope and direct it.

DESIGNS FOR HOME-MADE VALENTINES



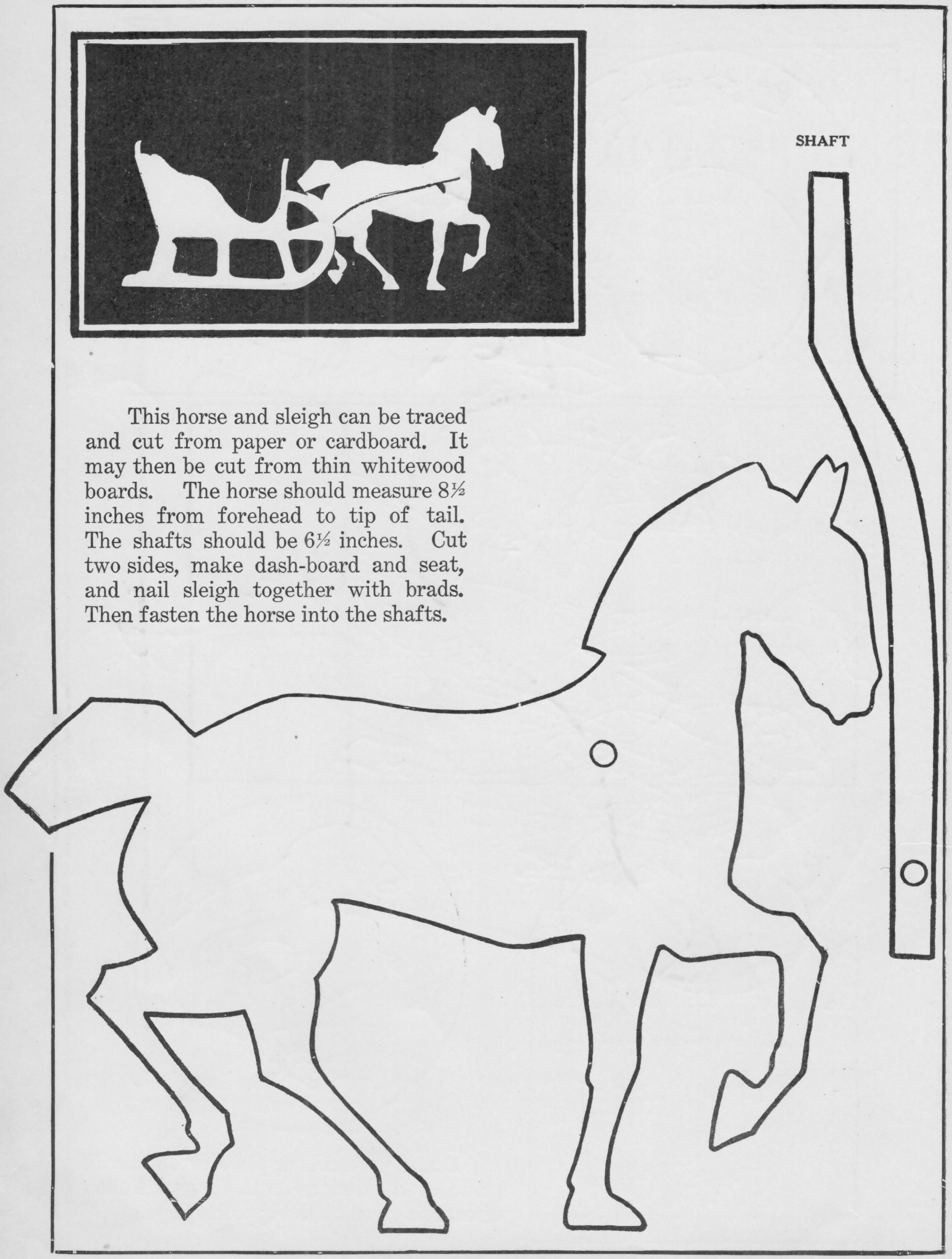




Easter postcards or place cards may be made of the designs on this page. Follow directions given on the opposite page.

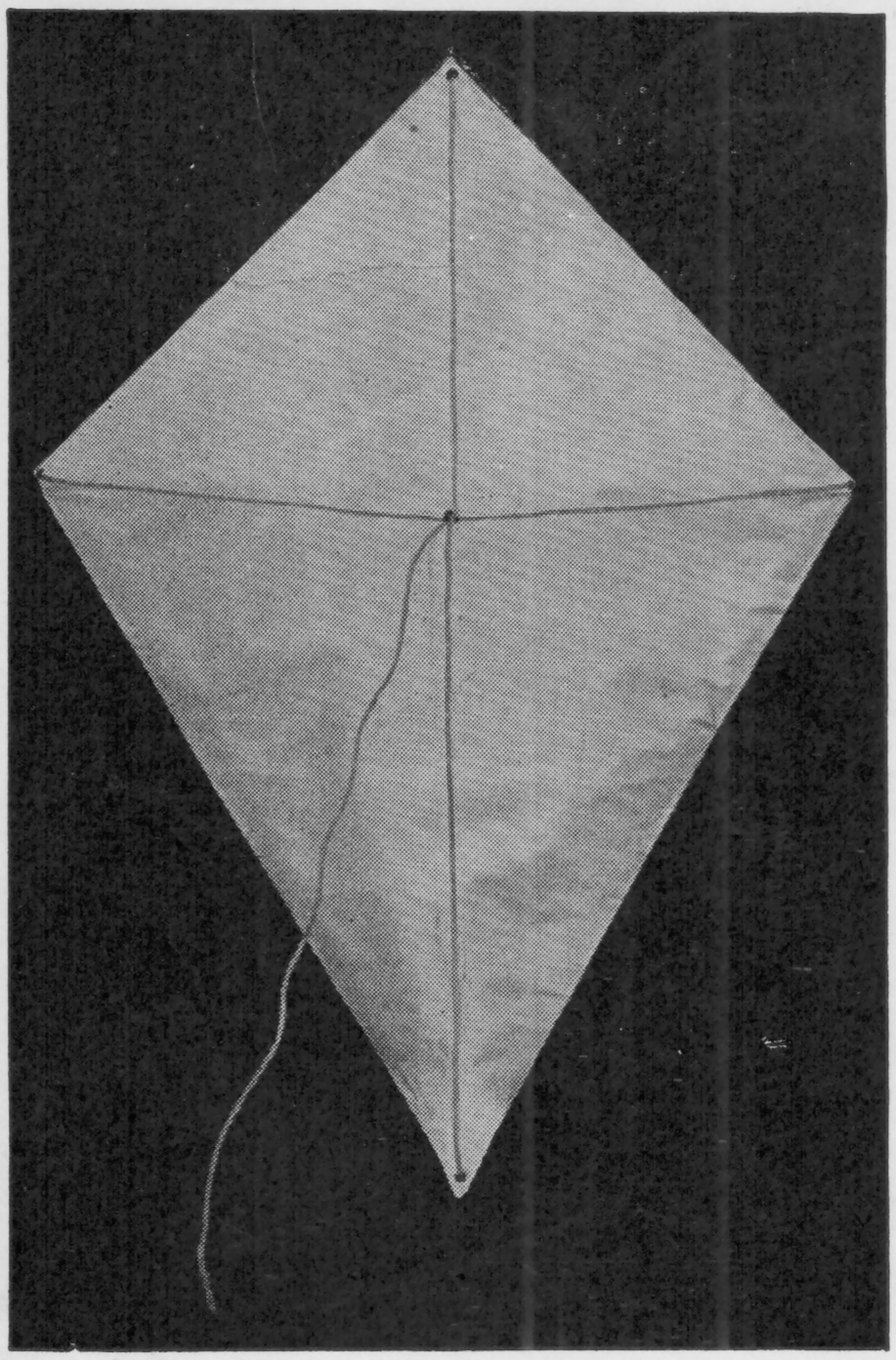
DESIGNS FOR EASTER CARDS

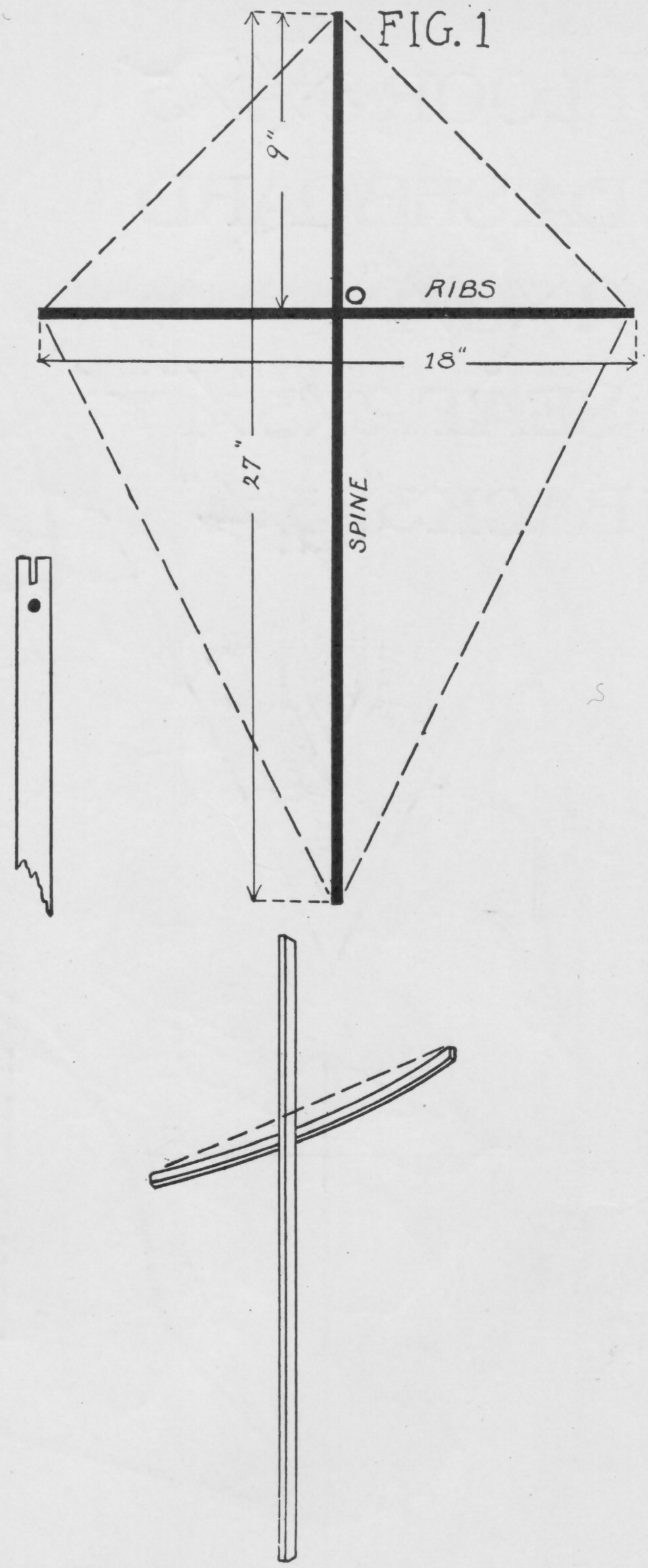
This horse and sleigh can be traced and cut from paper or cardboard. It may then be cut from thin whitewood boards. The horse should measure 8½ inches from forehead to tip of tail. The shafts should be 6½ inches. Cut two sides, make dash-board and seat, and nail sleigh together with brads. Then fasten the horse into the shafts.



PATTERNS FOR HORSE AND SLEIGH

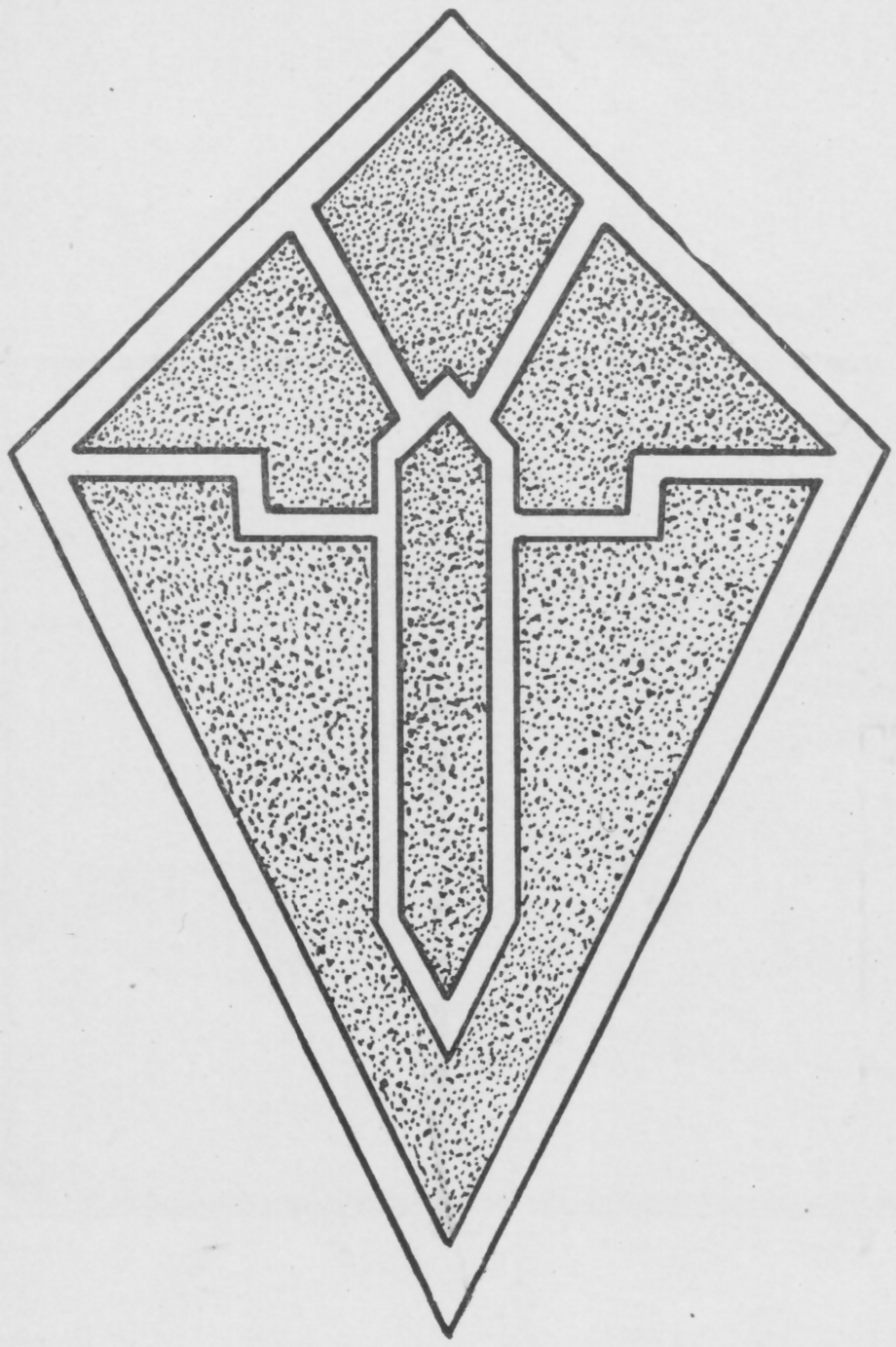
PATTERN OF SLEIGH

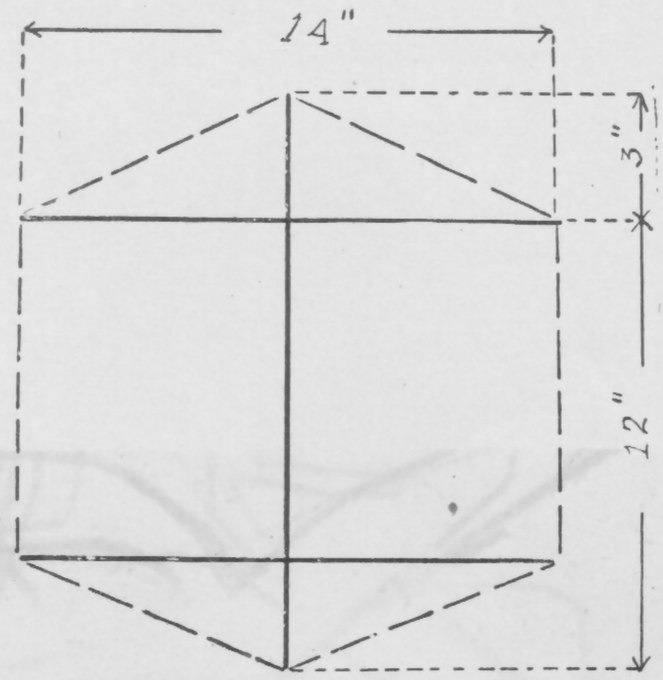


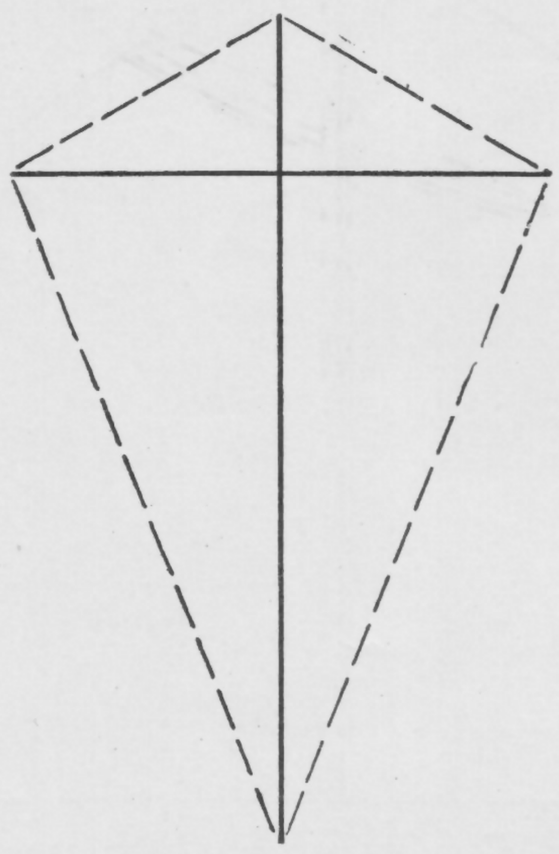


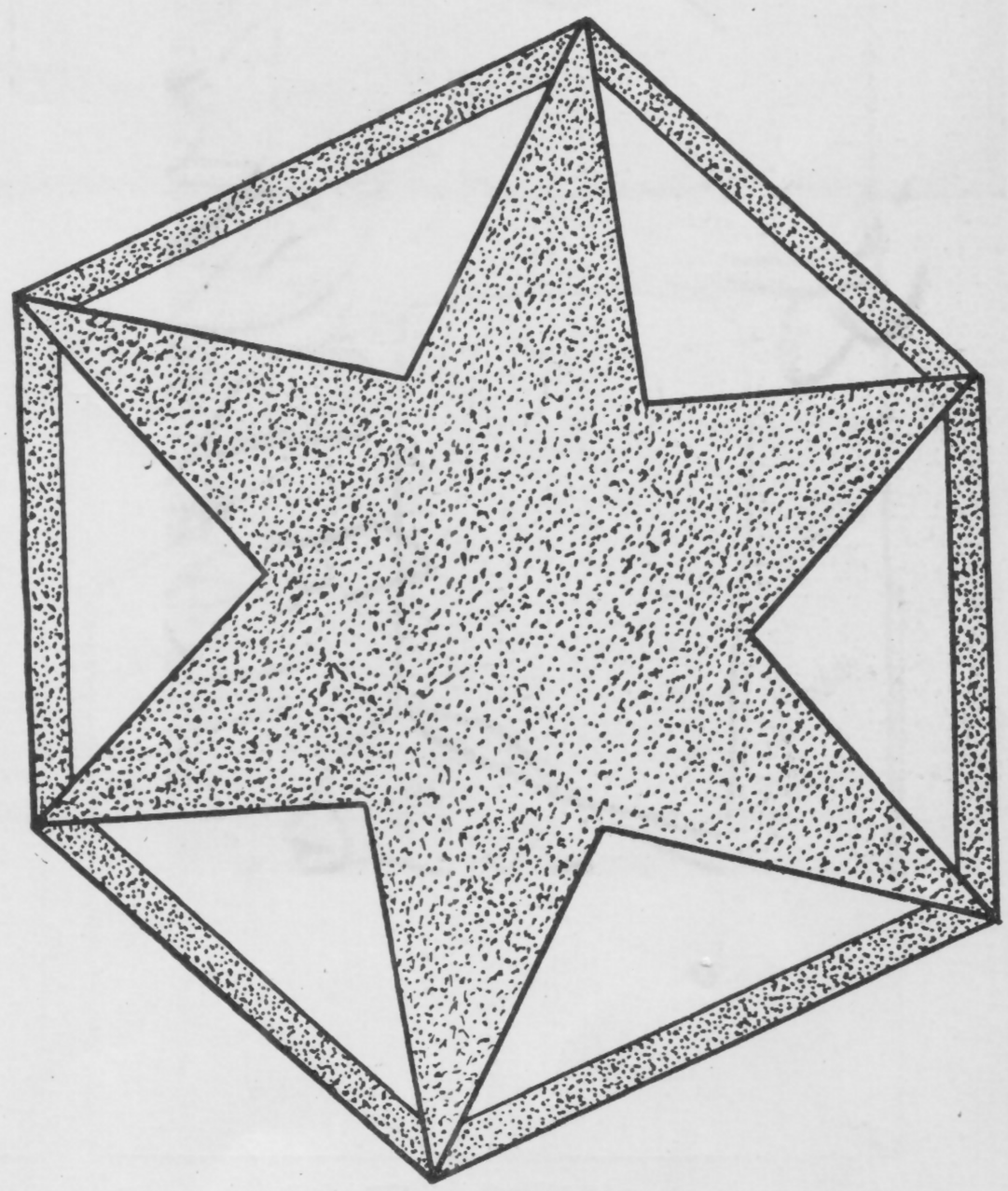
This design is for a kite that requires no tail. Let us notch both ends of the ribs and spine and drill a hole for the harness before we bind them together at o. Then curve the ribs and secure the cord about the frame. For the tailless kite the ribs are drawn to a curve by a strong linen cord drawn taut. Paste thin paper over this cord, allowing a one-inch margin, slip linen cord through the holes you drilled, to make the harness for your kite string.

PATTERN FOR A TAILLESS KITE



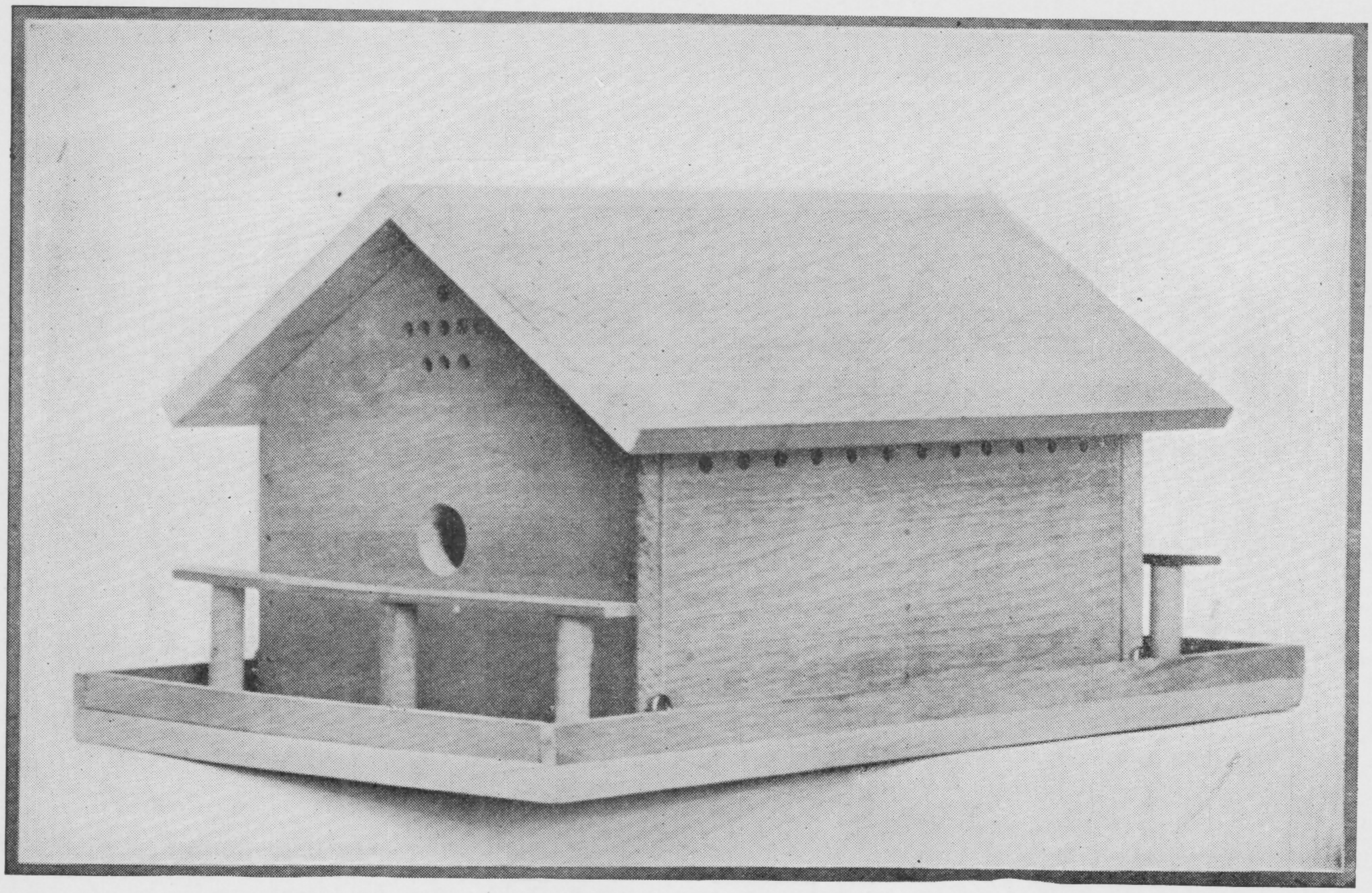


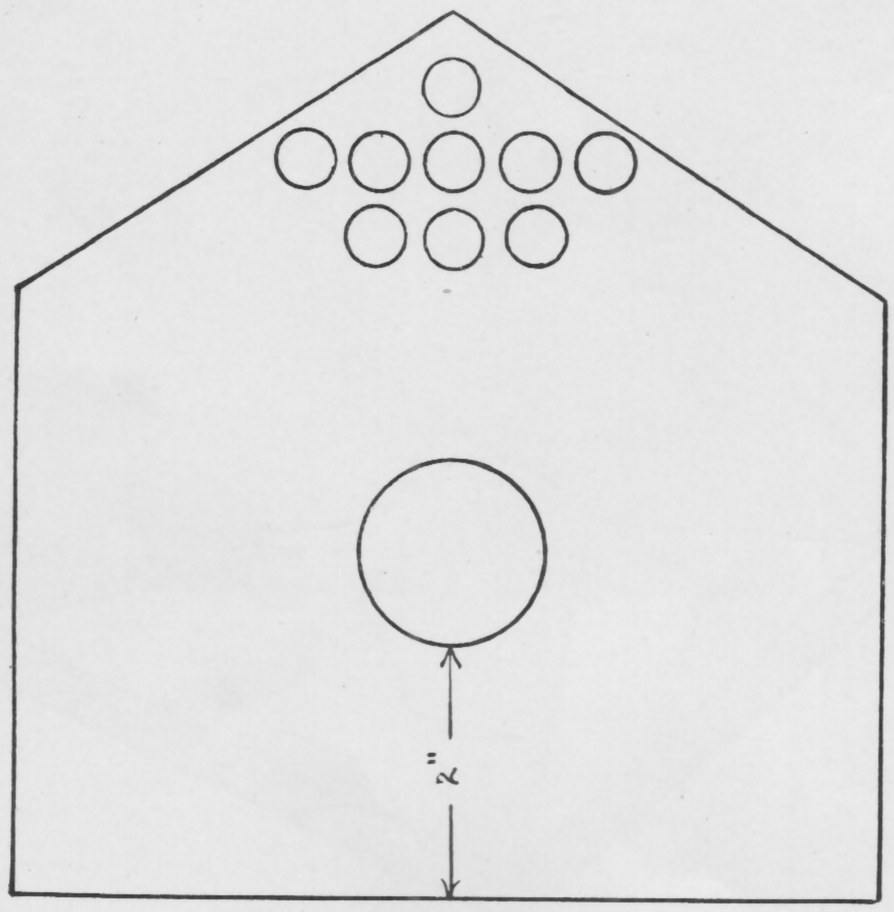




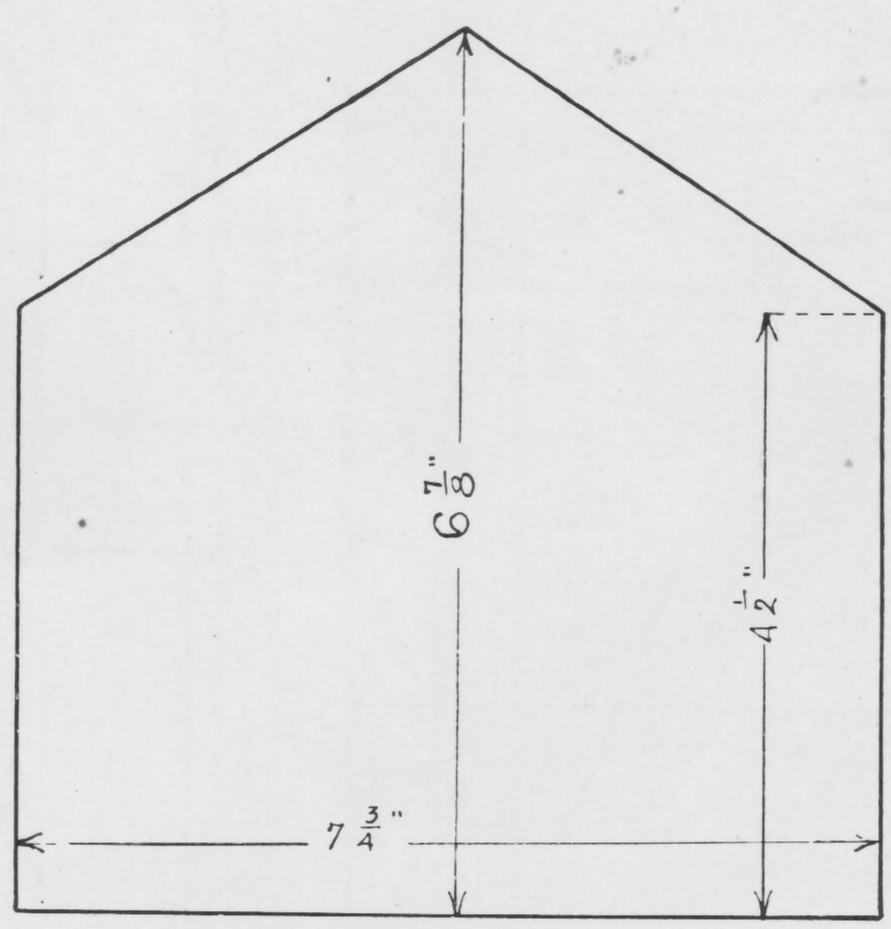
These figures show plans for kites requiring tails. Select strong 3-16 inch sticks, and cut them to the desired length. The ribs need not be bent. Proceed as in Figure 1 on the opposite page. Designs may be planned and cut from colored tissue paper. Paste them in place after your kite is made.

KITES WITH TAILS





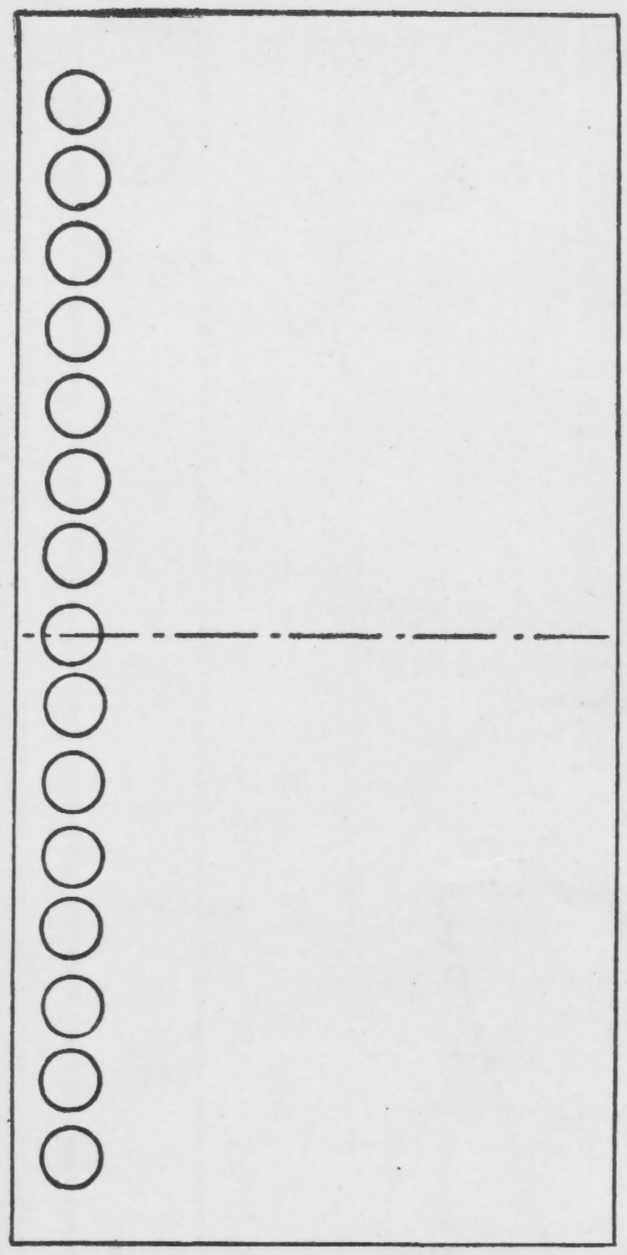
FRONT



PARTITION

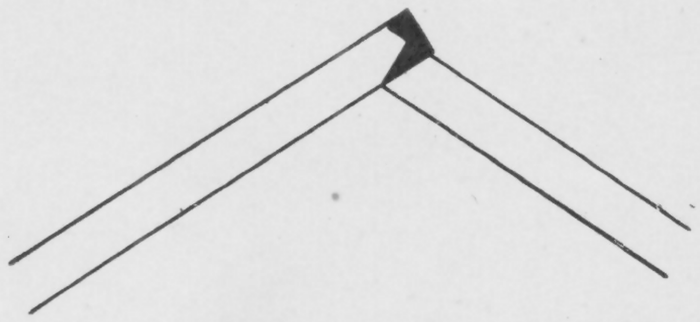
This diagram shows a tenement house for two wren families. The door must be not more than three-fourths of an inch wide. The house should be placed about ten feet from the ground, not too near your own house.

A HOUSE FOR MRS. WREN



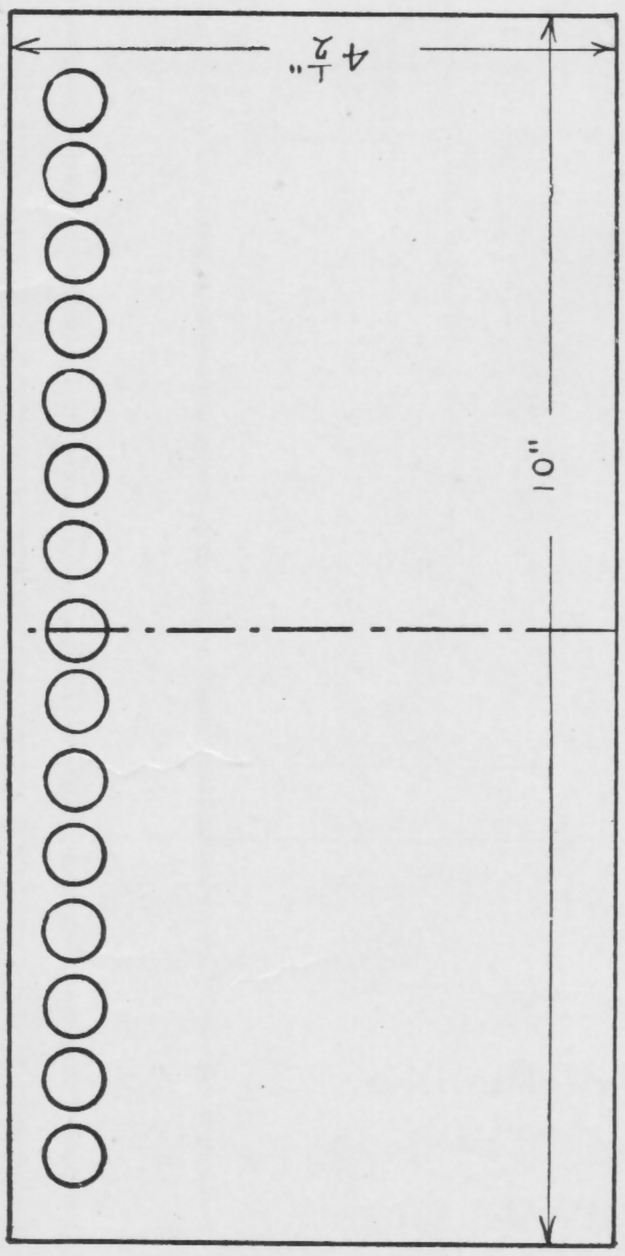
SIDE

THE WREN FAMILY MUST HAVE A PERCH ON WHICH TO STAND.

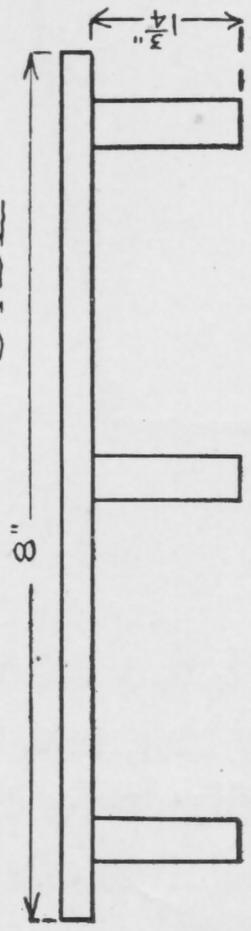


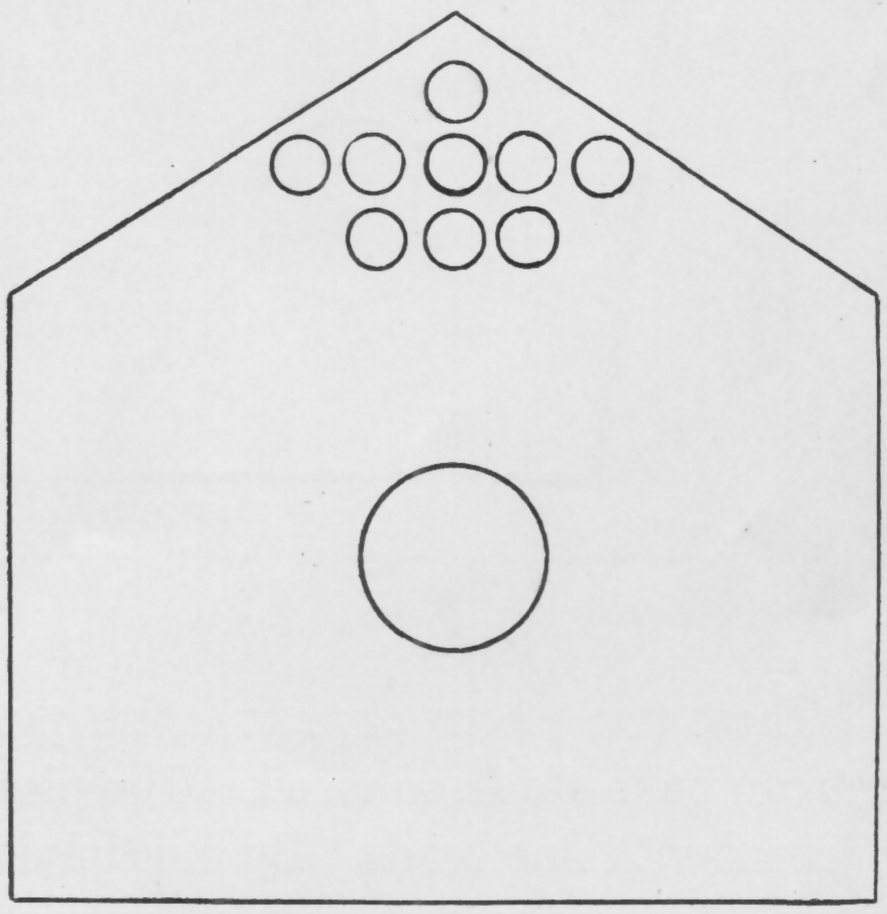
METHOD OF ATTACHING ROOF. FIT TWO PIECES OF SOFT WOOD $12\frac{7}{8}$"x$5\frac{1}{2}$"&$12\frac{7}{8}$"x6" TOGETHER, PLANING THE ENDS AS SHOWN BY SHADING.

THE PLATFORM SHOULD BE $9\frac{3}{4}$"x$16\frac{1}{4}$", FINISHED WITH A HALF INCH LEDGE TO PREVENT IT FROM WARPING.



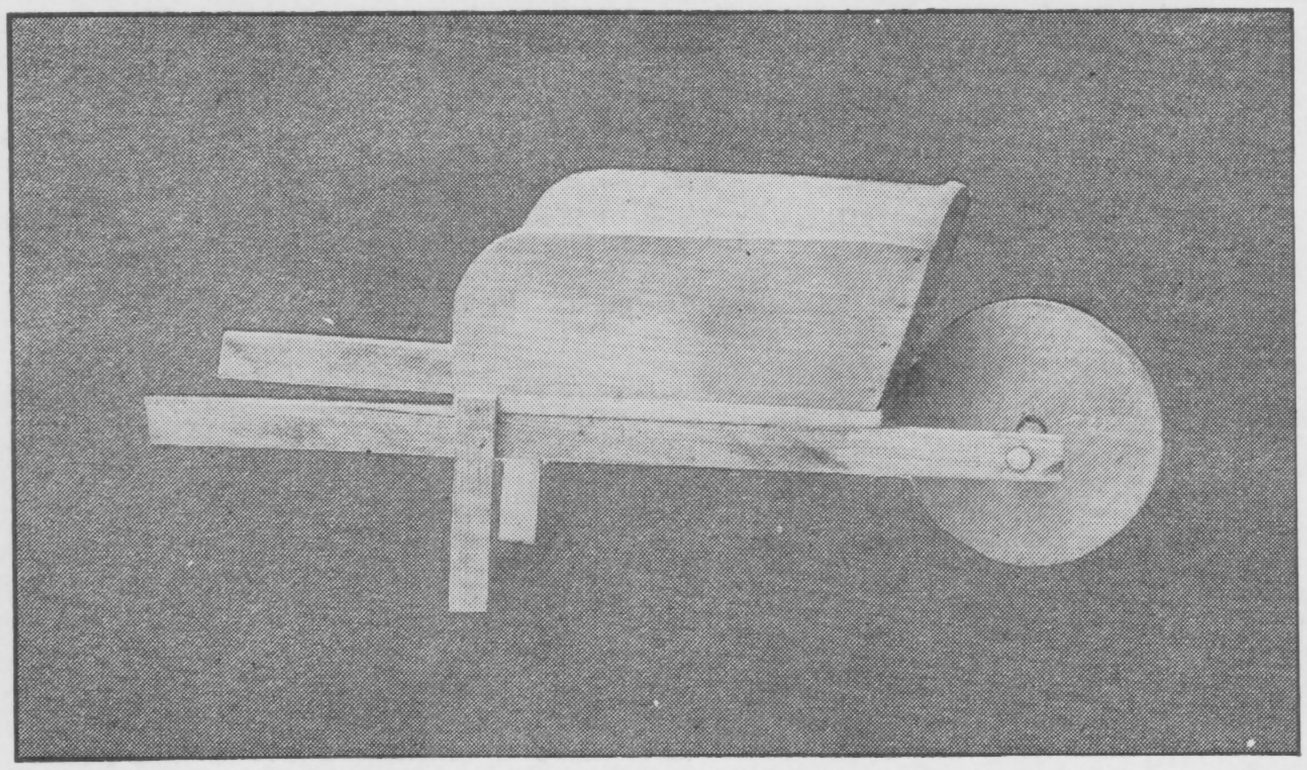
SIDE

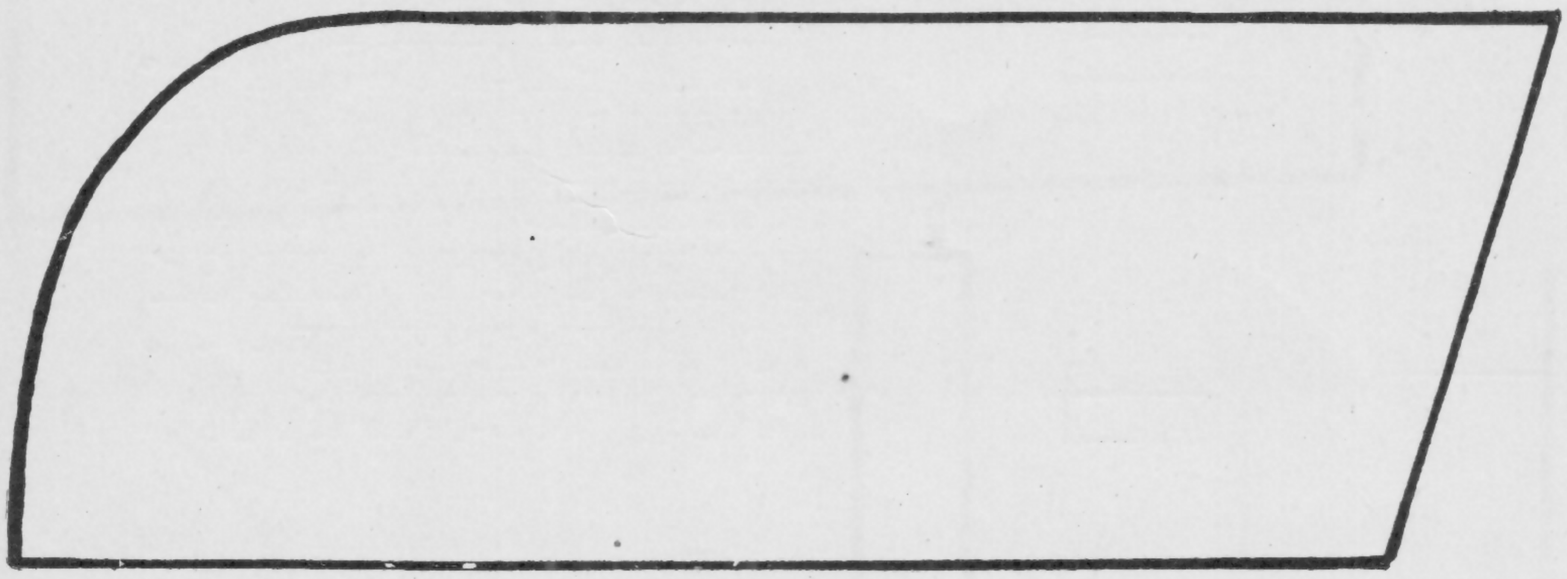




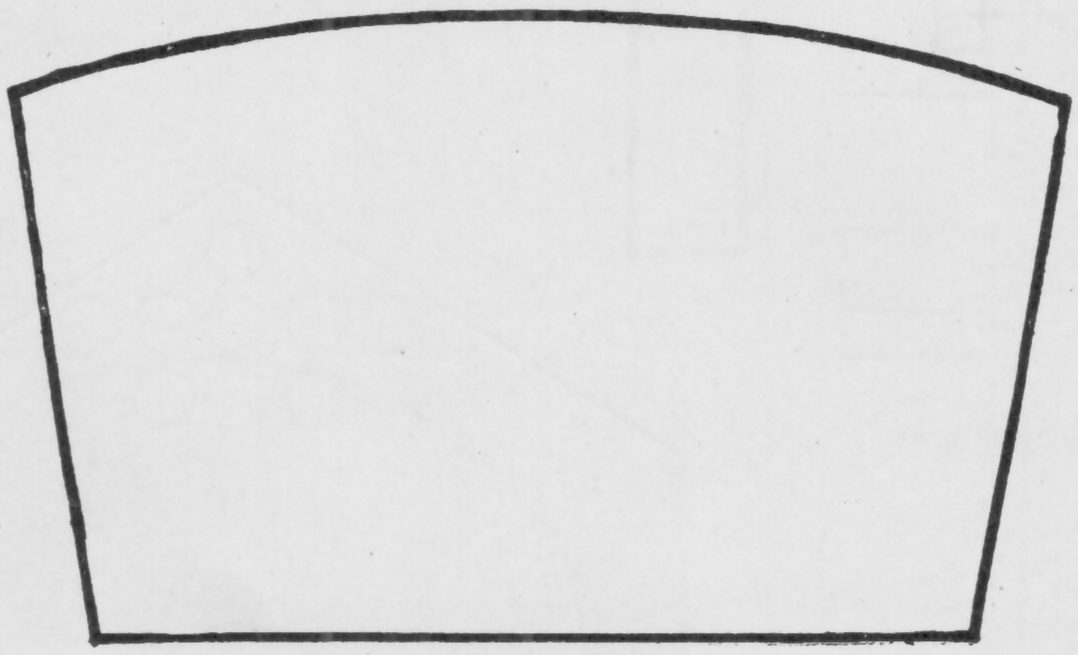
BACK.

DIAGRAMS FOR WREN'S HOUSE

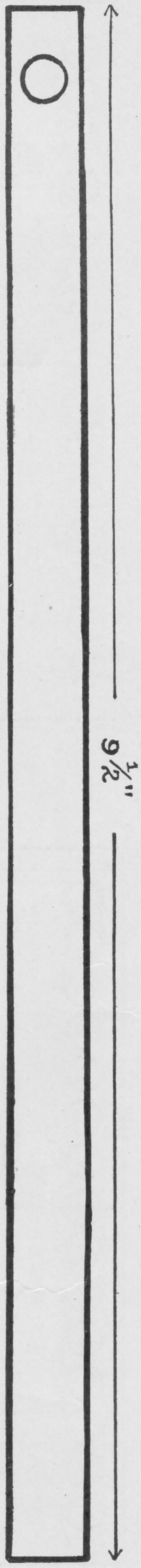




SIDE



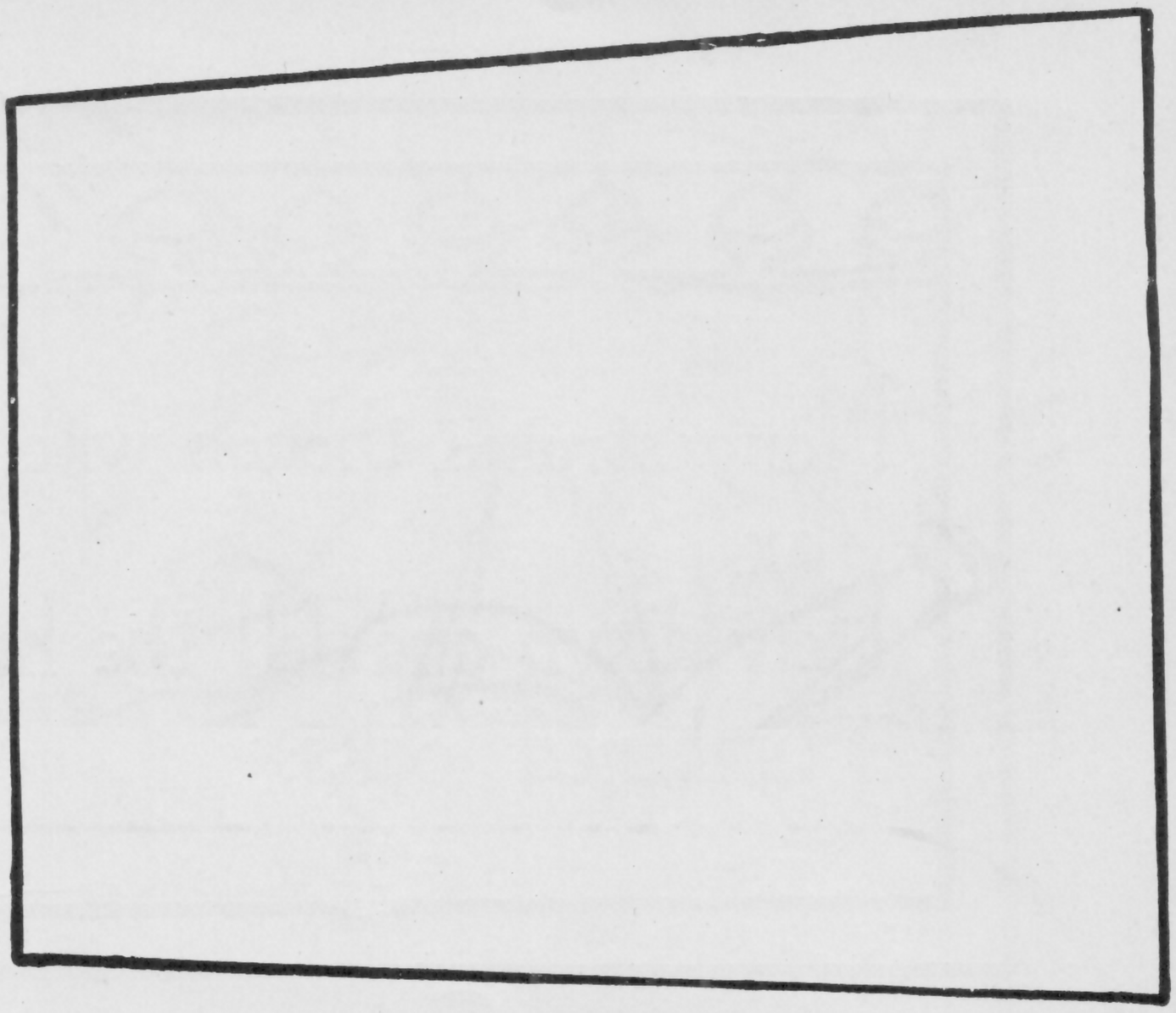
FRONT



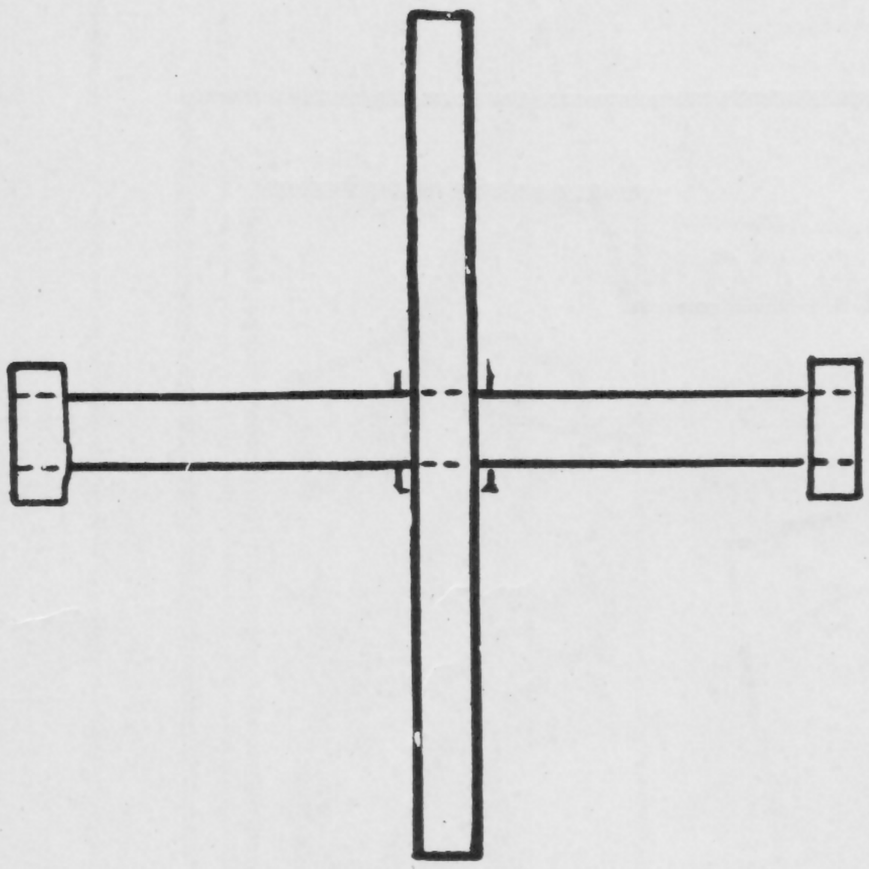
SIDE BAR AND HANDLE

These two pages give full size patterns for a wheelbarrow that can be made from wood. The pieces may be glued together, or joined with fine brads. By multiplying the dimensions as given by two, three, four, etc., and increasing the thickness of the wood, this model may serve for a real wheelbarrow.

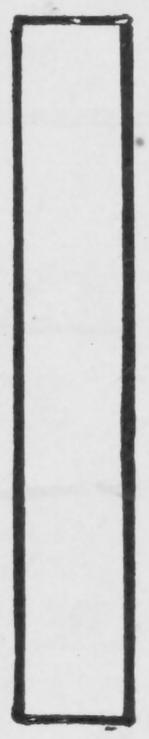
PATTERNS FOR A WHEELBARROW

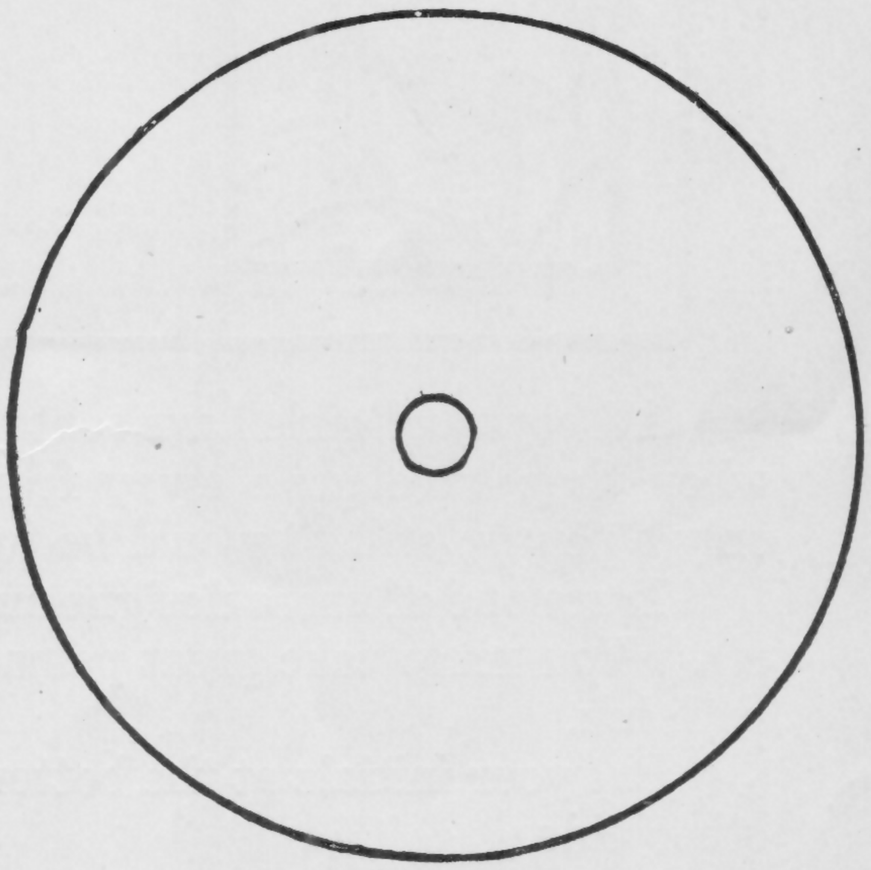


BOTTOM



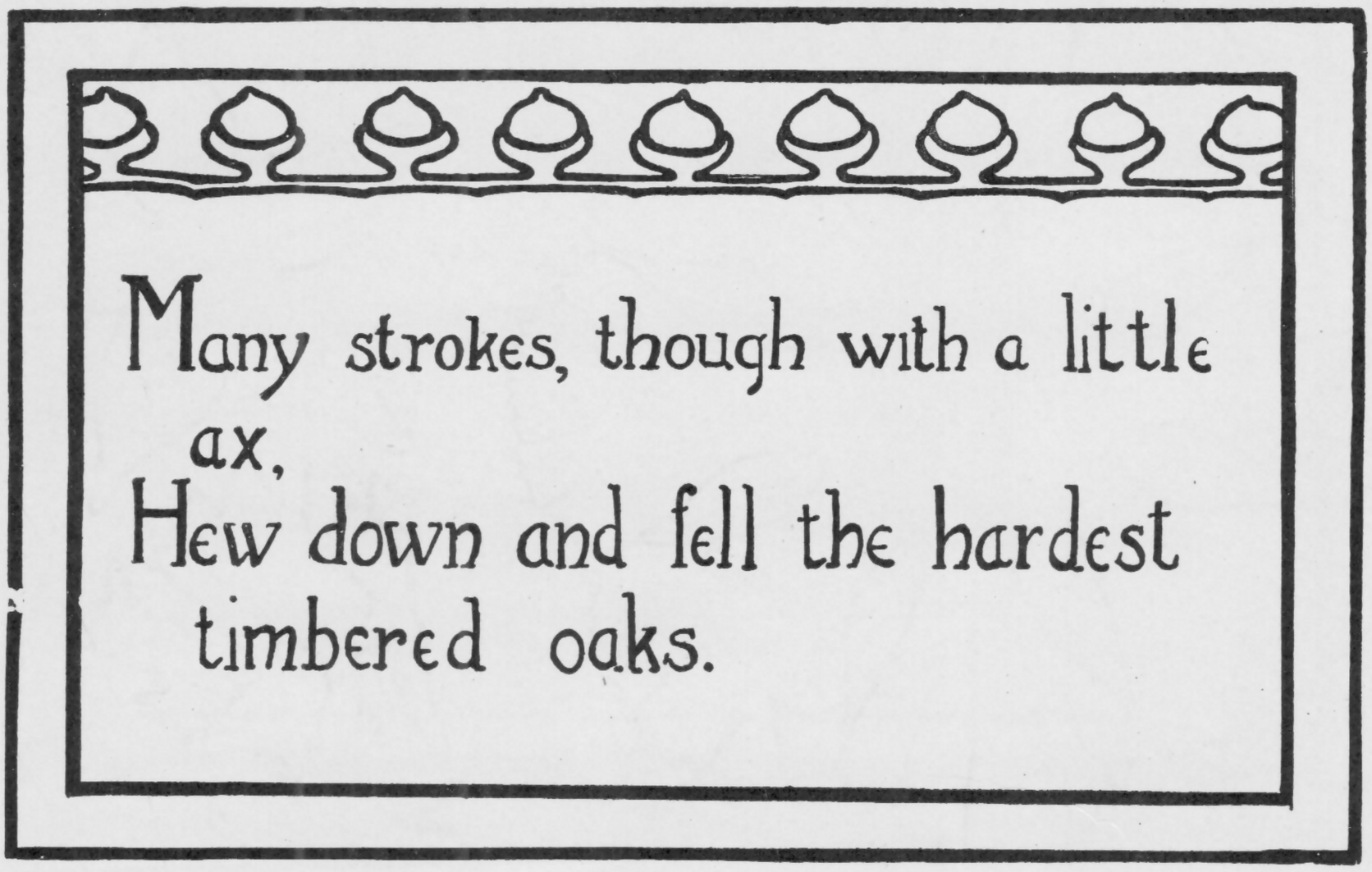
AXLE OF WHEEL MADE FROM 1-4″





WHEEL

PATTERNS FOR A WHEELBARROW

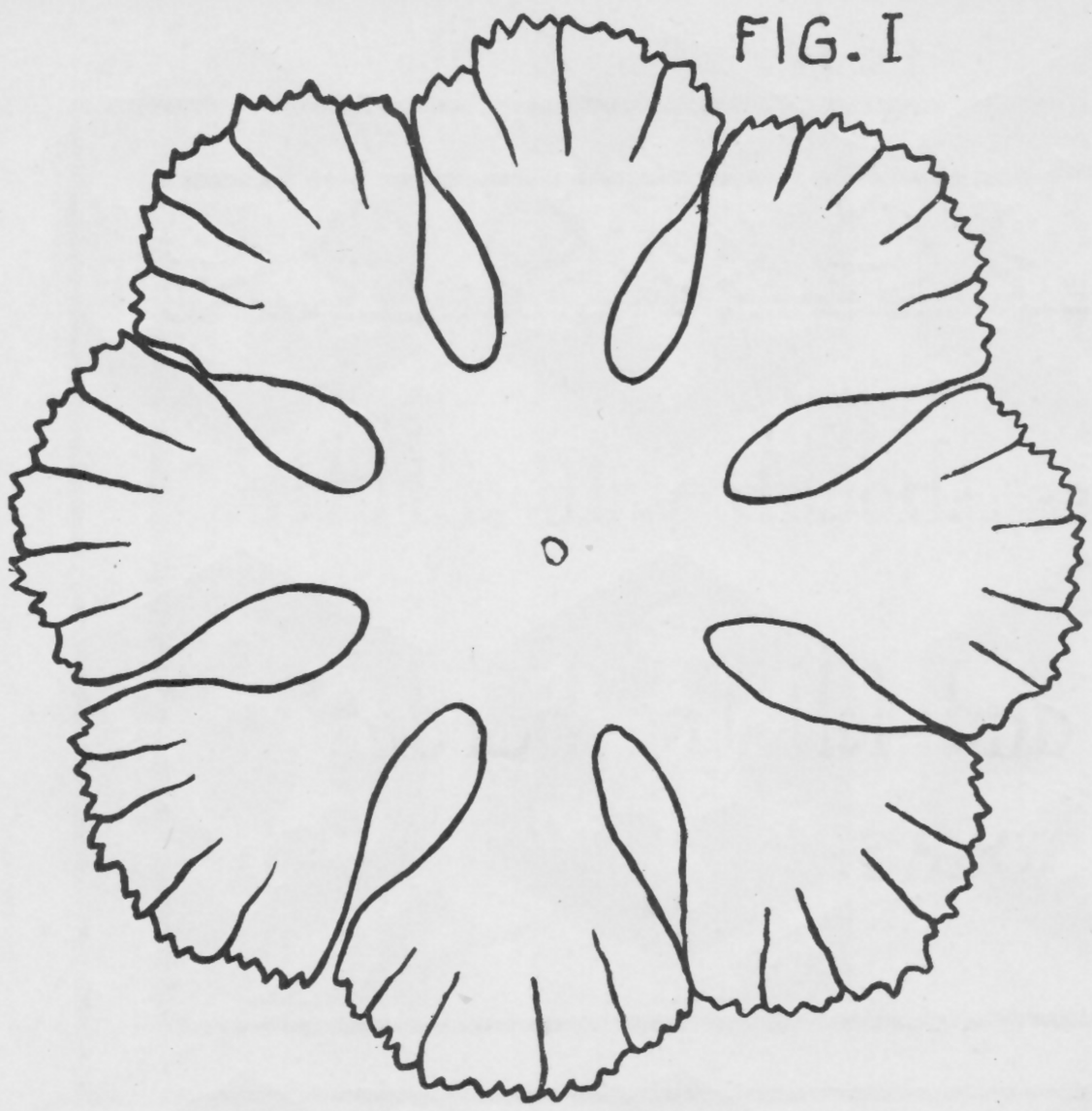


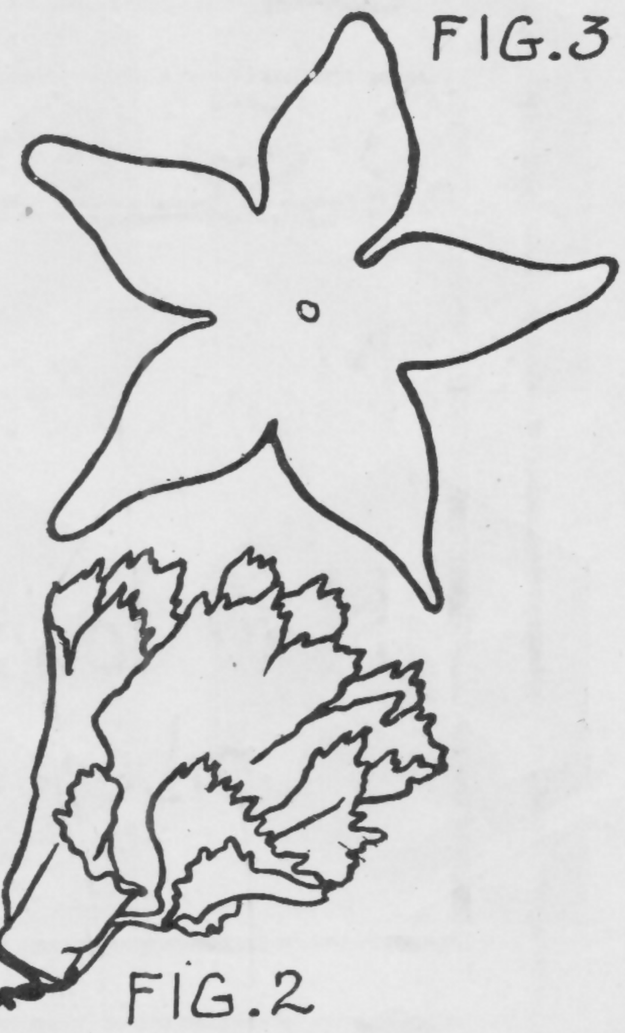
All boys and girls have sent postcards to their friends, or to their family when they have gone away from home. One can buy a pretty postcard for only a penny; still, it would be fun to make a card all by oneself.

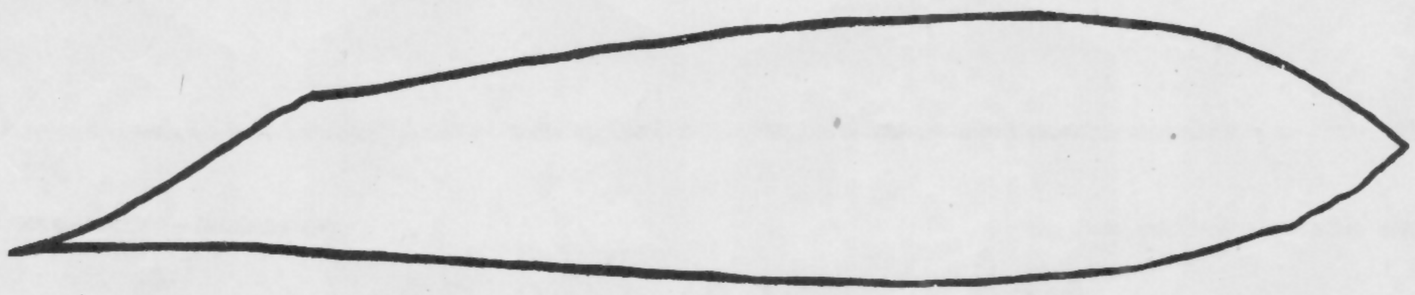
Trace one of these designs on water color paper and paint with water colors. You must take great pains with the lettering which should be gone over with ink.

Put your initials at the bottom of the card. Address it very neatly on the other side.

TWO POSTCARDS TO MAKE



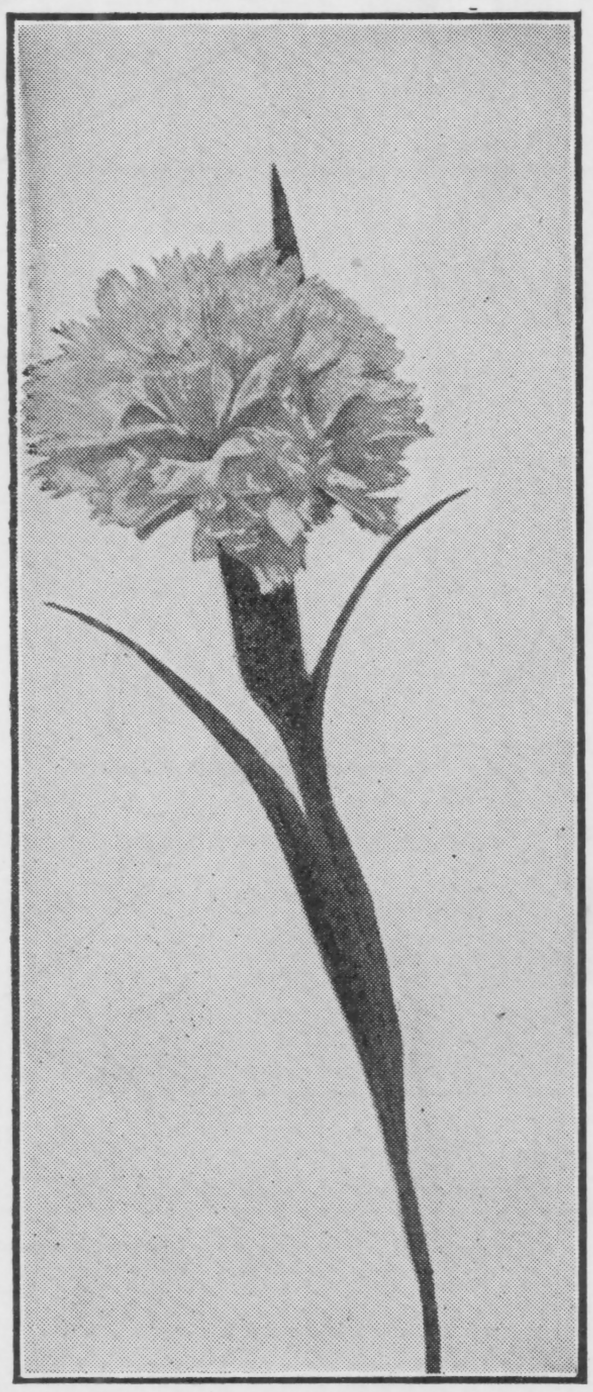




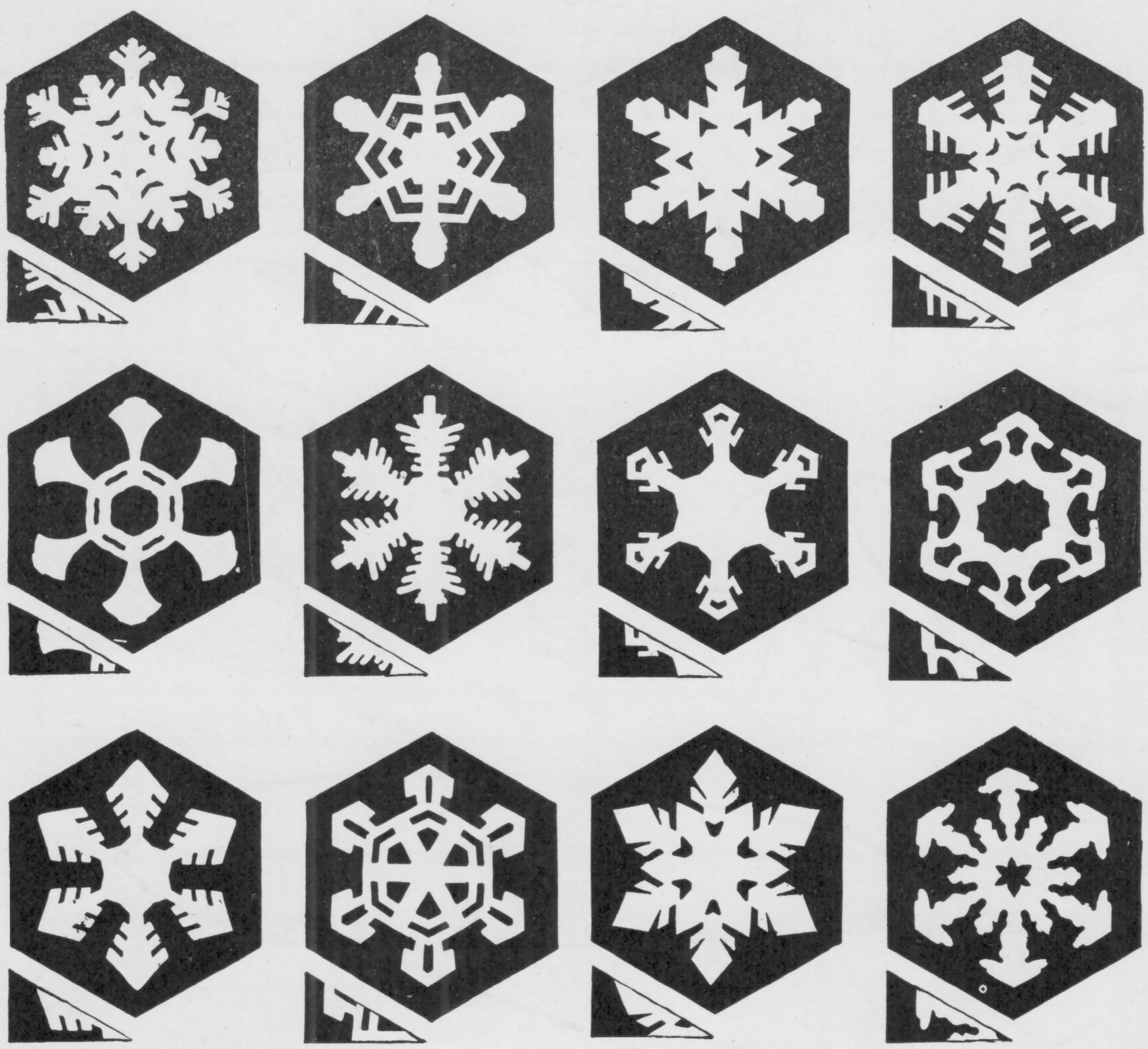
Every child wants to wear a carnation on Mother's Day, the second Sunday in May. Perhaps you cannot buy a real flower if you live in the country. Never mind, a paper carnation is lovely, and not hard to make.

Use tissue paper. Cut nine patterns from Fig. 1. Fold two of these sections as shown in Fig. 2, and bind with thin wire, leaving a long end for the stem. Push the remaining sections, unfolded, close to the center. Add green calyx (Fig. 3), bind stem with green, and twist leaves in pairs on the stem.

Now with this carnation of your own make pinned to your dress if you are a girl, or to your coat if you are a boy, you will feel the spirit of the day. Read more about it on page 479 in this book.



PAPER CARNATION FOR MOTHER'S DAY



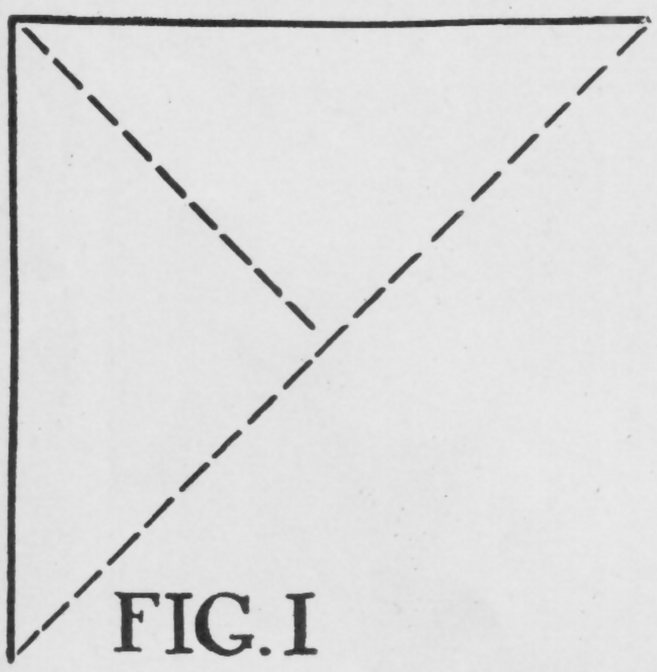


FIG. I

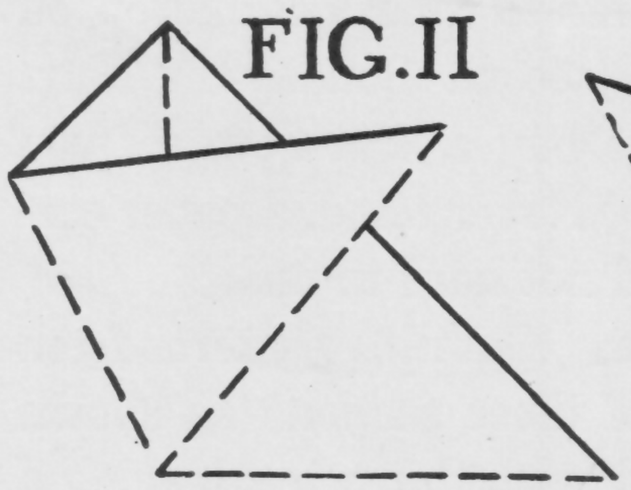


FIG. II

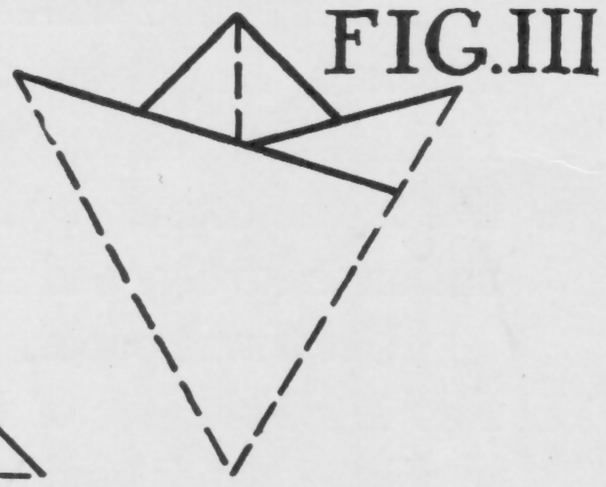


FIG. III

Fold the diagonals of a five-inch square. Open as in Fig. I. Fold the left edge two-thirds of the length from lower left angle. Fig. II. Fold right edge in the same way. Fig. III. Turn the folded square over and at the intersections of the folds draw and cut A B. Fig. IV. Cut patterns with A as center and from folded edges. Fold on dotted lines and cut on full lines.

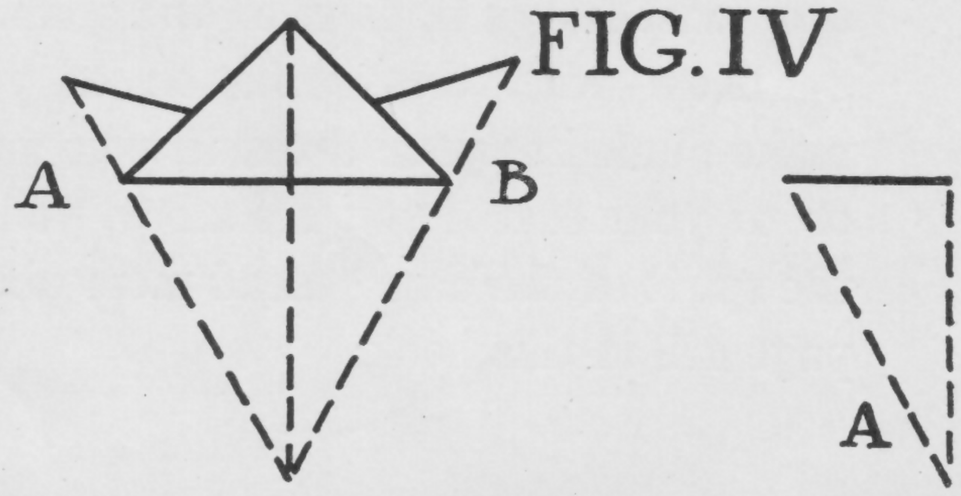
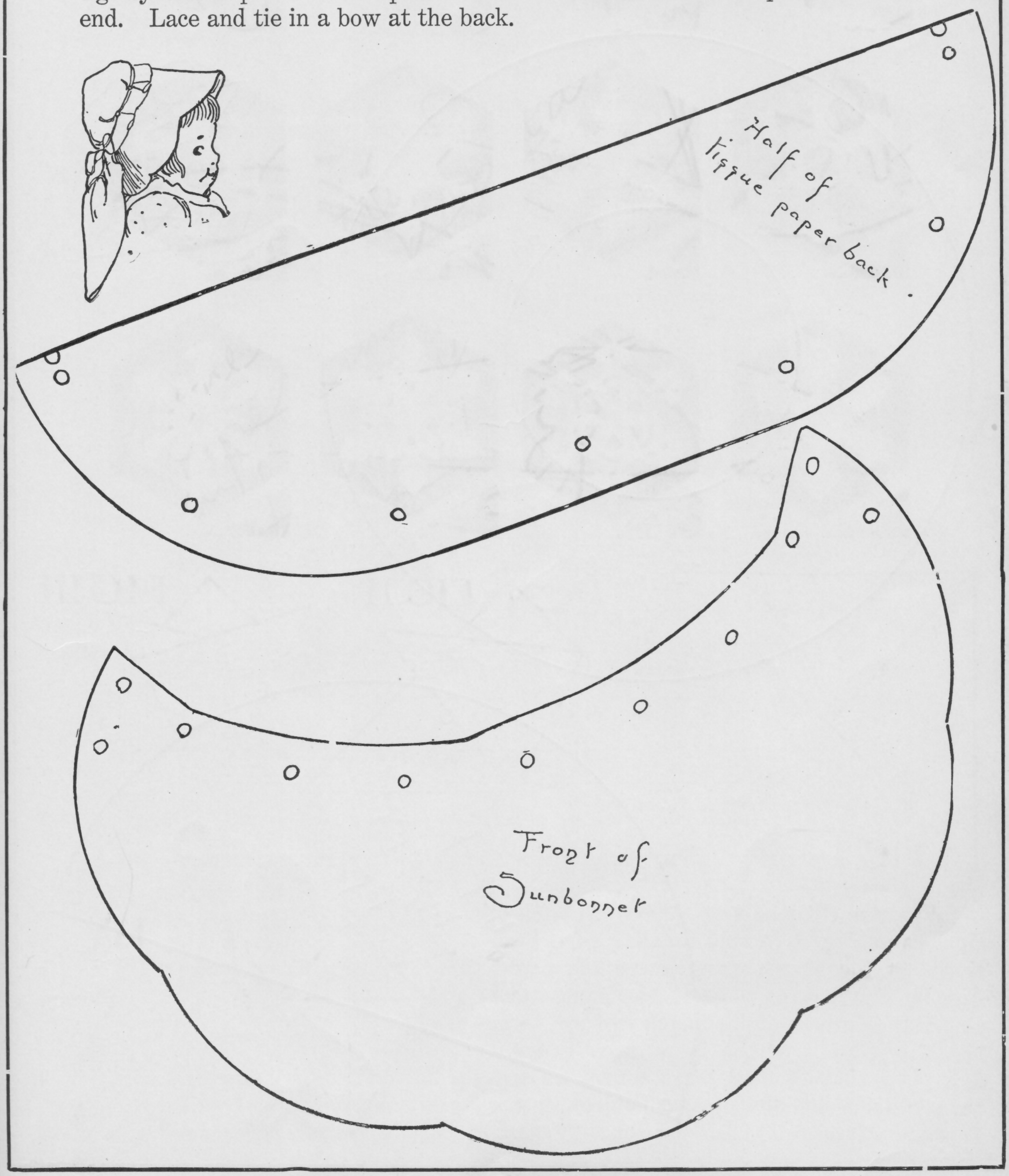


FIG. IV

PAPER SNOW CRYSTALS

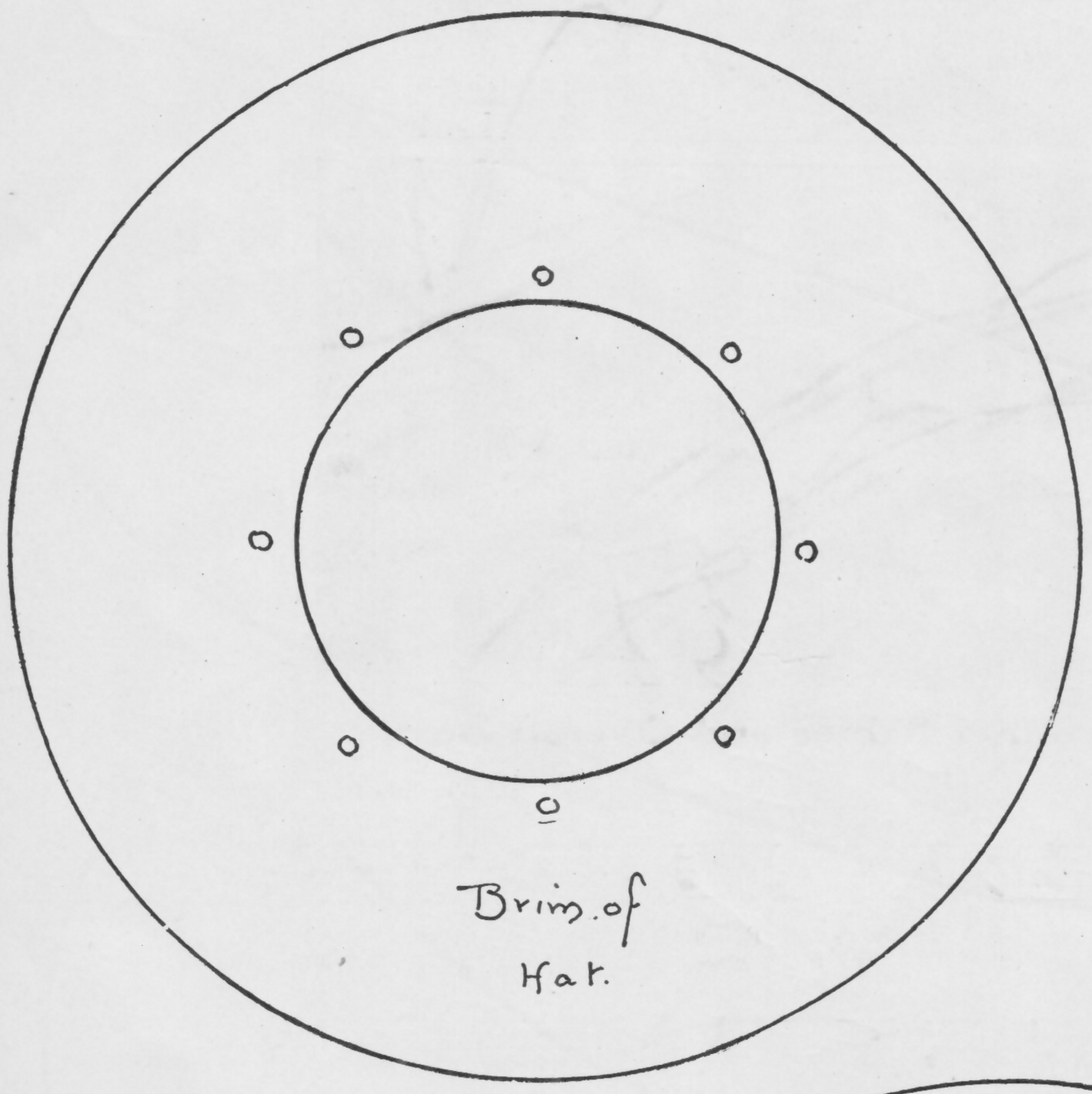
Sunbonnets and Hats for Dolly may be made from the patterns on this and the next page, and by enlarging the patterns bonnets and hats for girls and boys may be fashioned. They would be attractive souvenirs for a children's party.

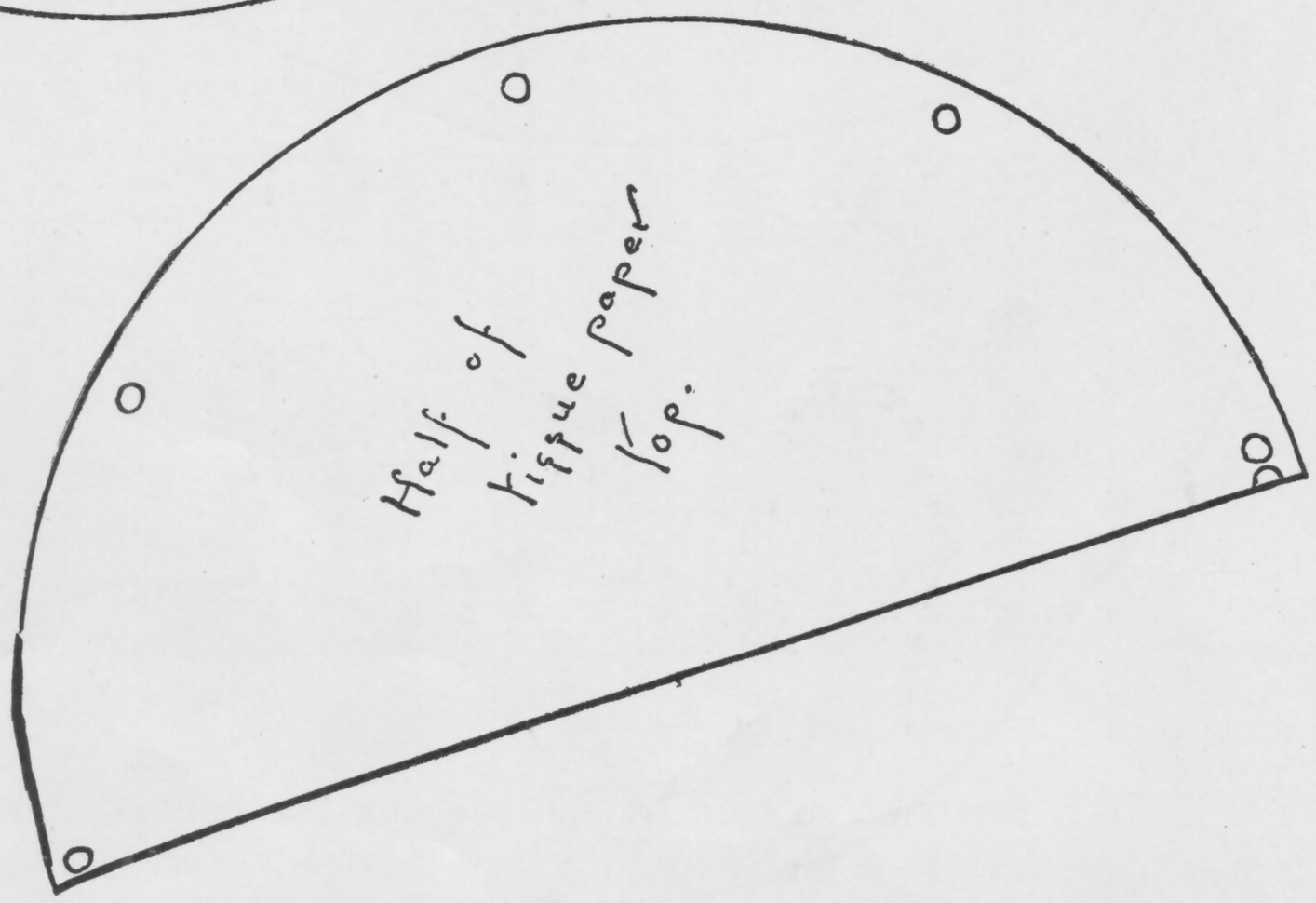
For the Sunbonnet cut the front from any stiff paper and the back from tissue paper. Perforate with a punch. Place the center perforations of the front and back together. Lace down each side, then back, so each fold is tightly held in place. Place perforations in center of back on perforations at end. Lace and tie in a bow at the back.



PATTERN FOR SUNBONNET

To make the Hat, cut the brim from oak-tag or any stiff paper, and the top from tissue paper. Perforate with a punch. Match the perforations in the top with those of the brim, and lace with cord to match the top.

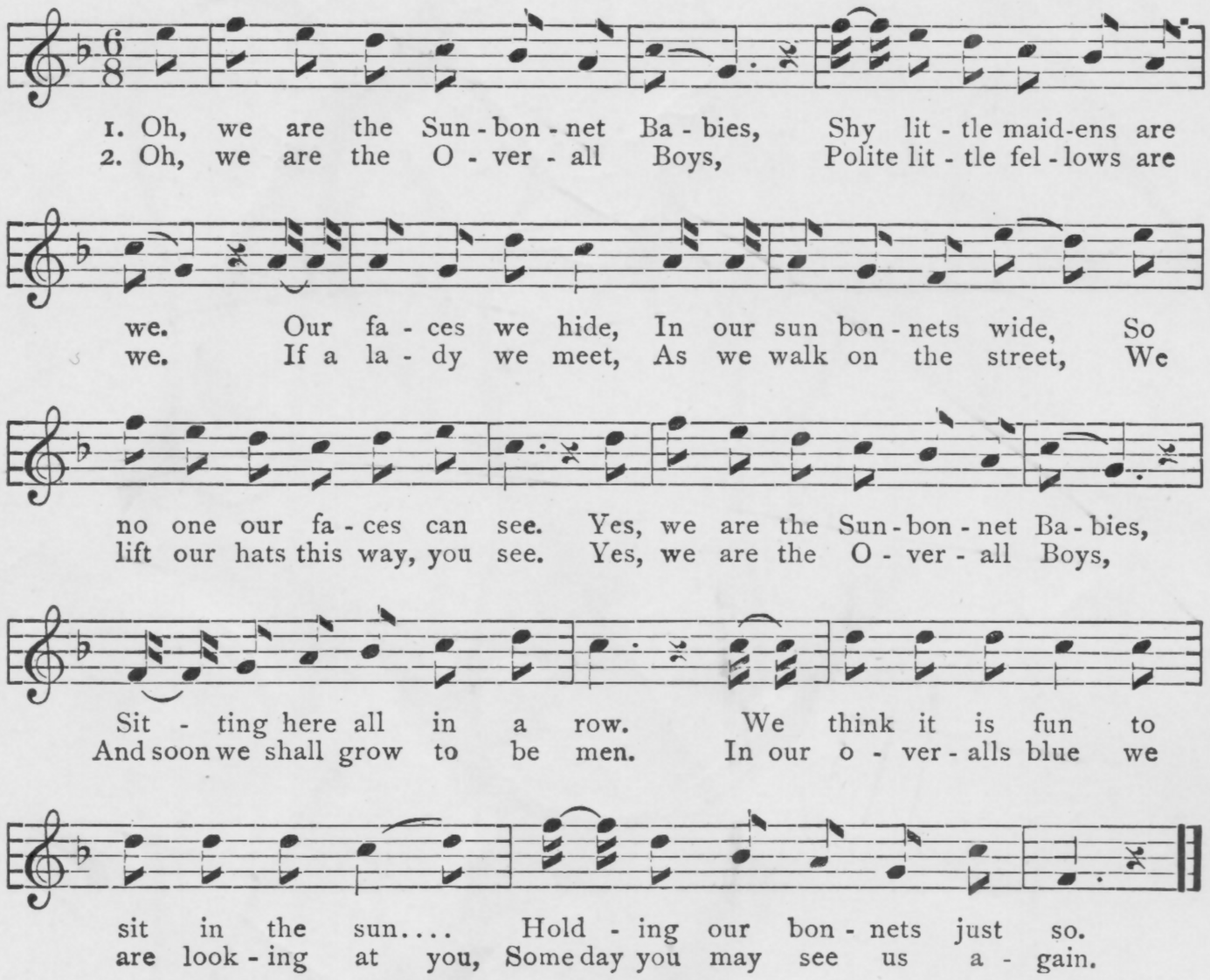




PATTERN FOR FANCY HAT

Sunbonnet Babies and Overall Boys

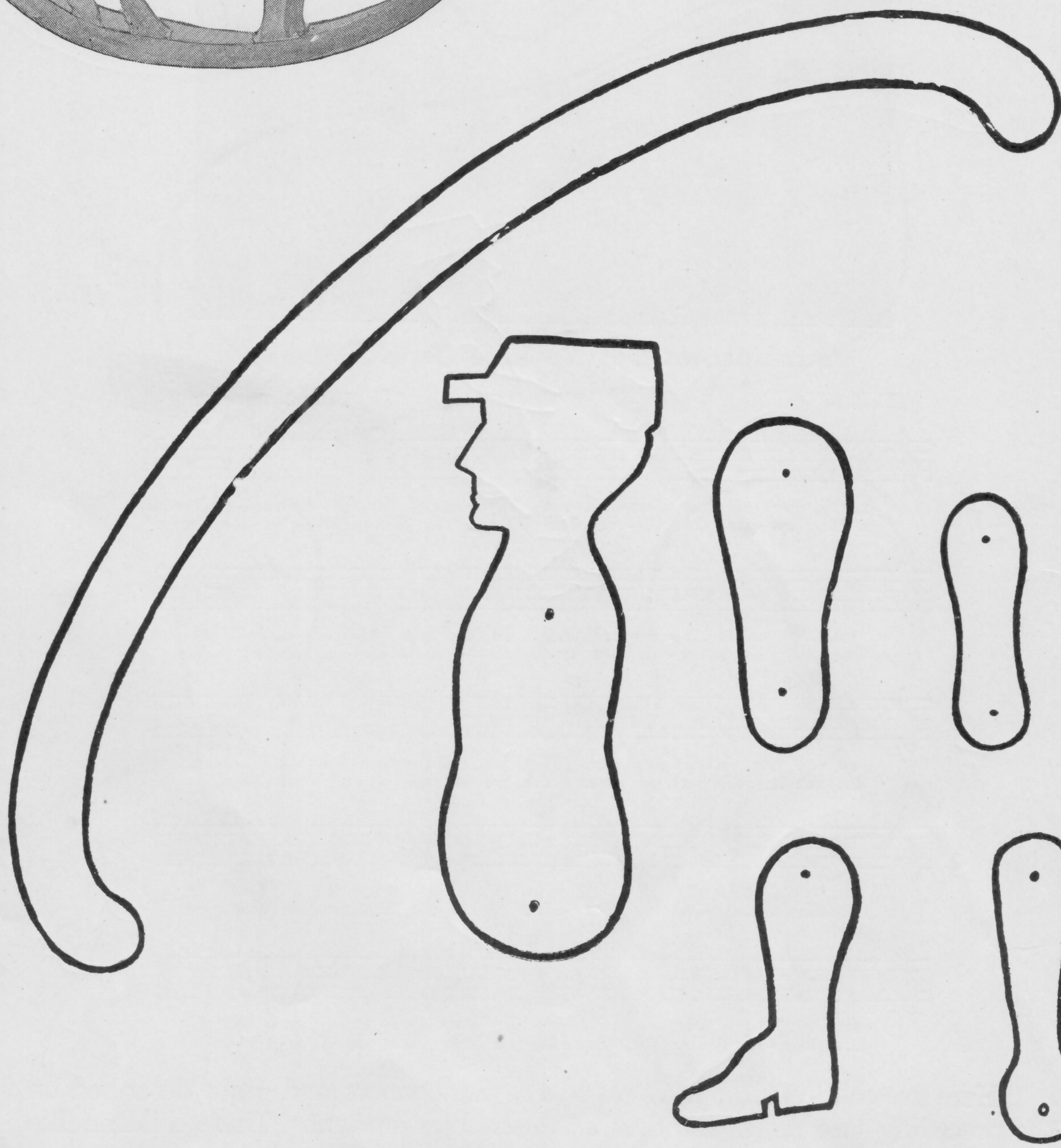
E. B. B. ELLA B. BURKETT



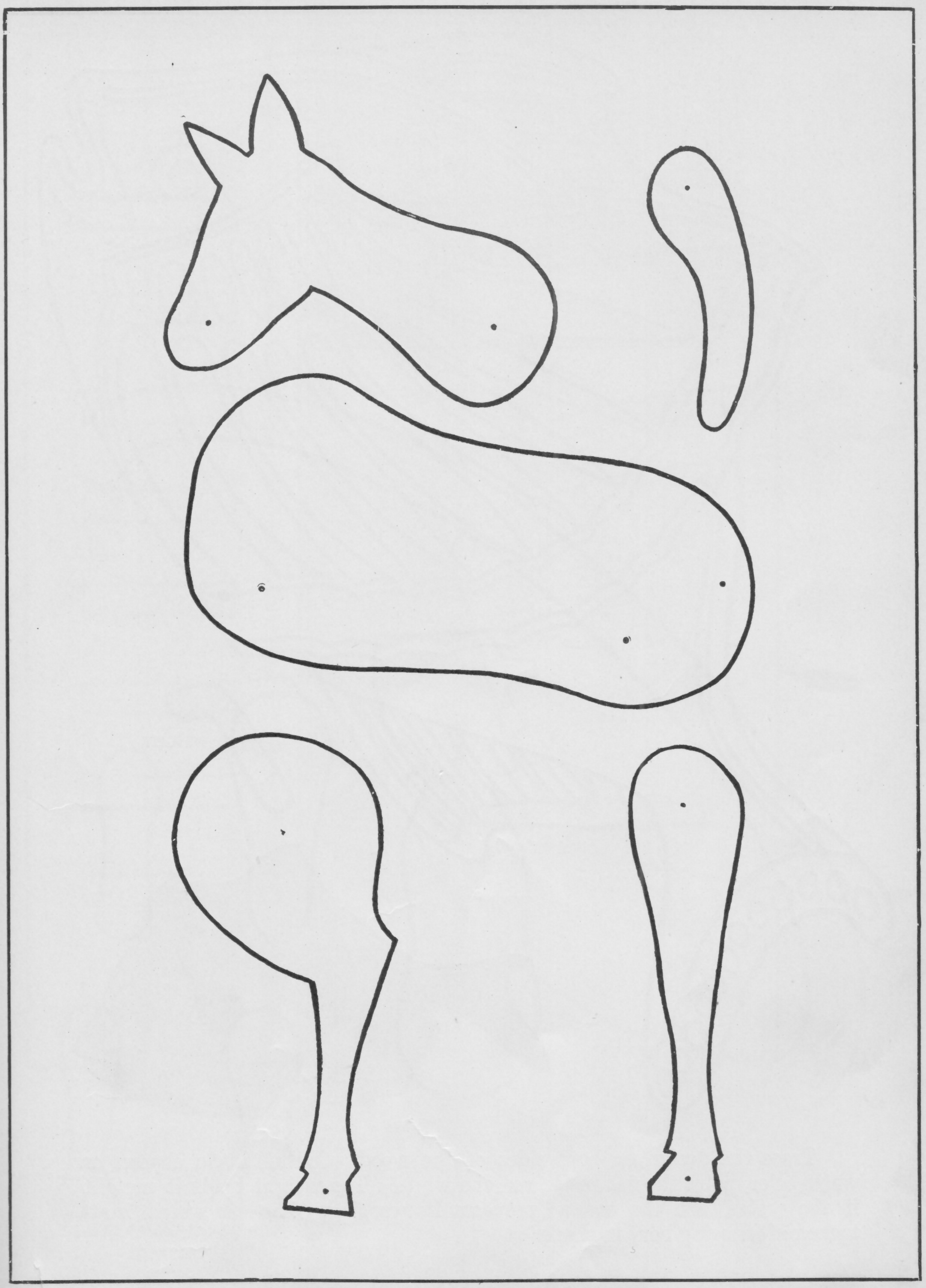
Here are children who have made the Sunbonnets and Hats described on the preceding two pages and dressed themselves in them. These children like to sing the song on this page. Let us learn it, too.

CHILDREN AS SUNBONNET GIRLS AND OVERALL BOYS

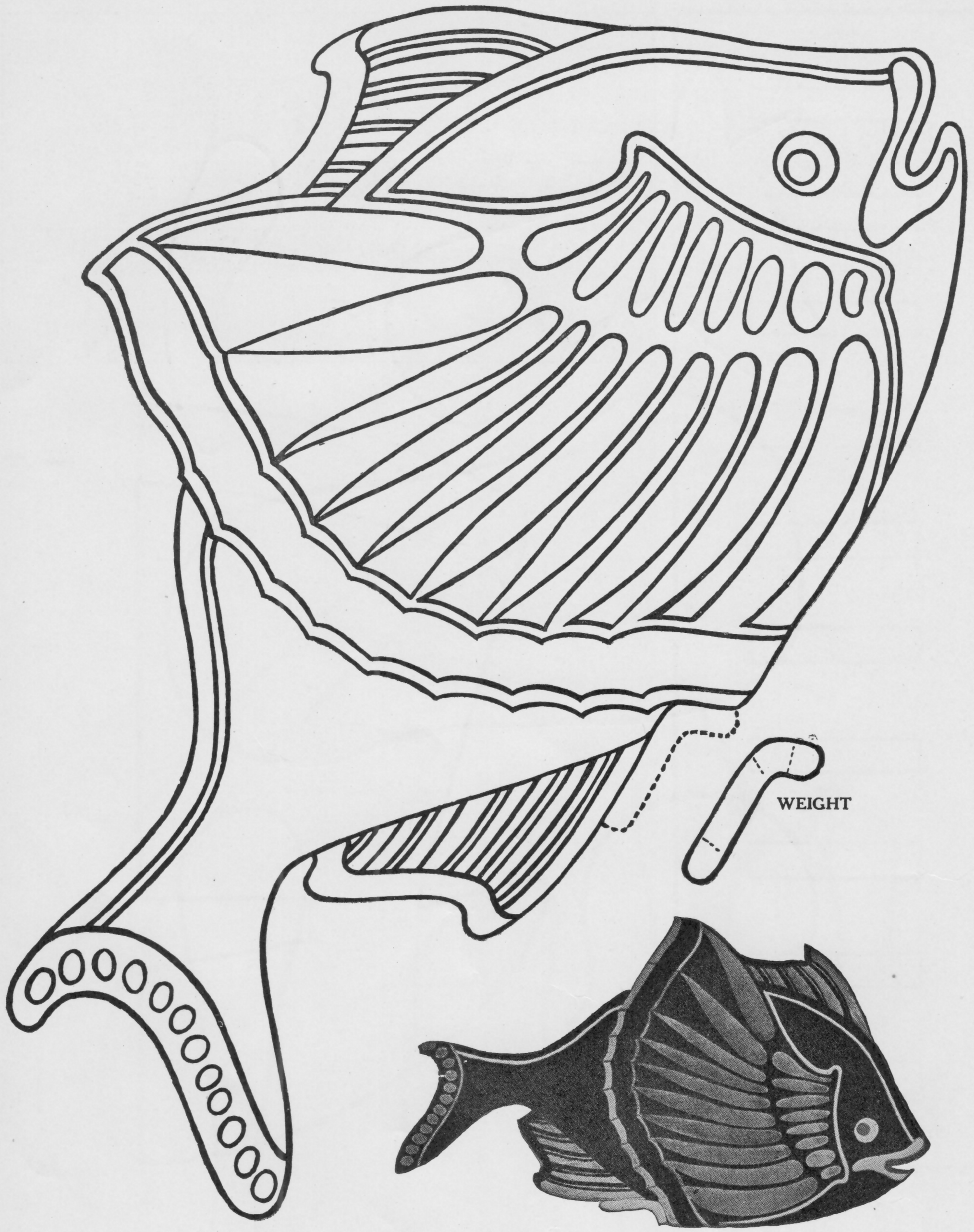
These two pages give full size drawings of the man and horse. Cut them from wood or heavy cardboard, and wire together at the joints. There will be two rockers necessary. This toy can be painted so as to look very lifelike.



PATTERNS FOR ROCKING HORSE AND MAN

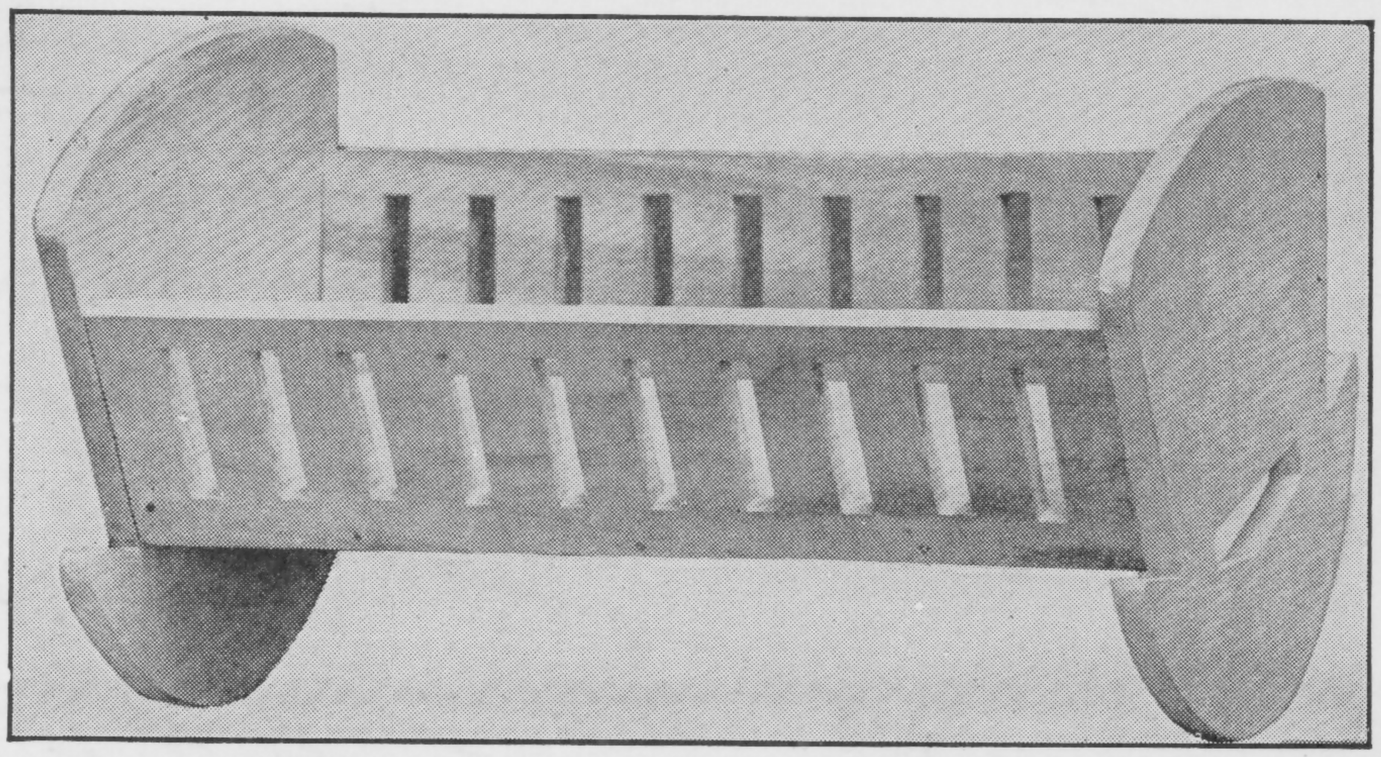


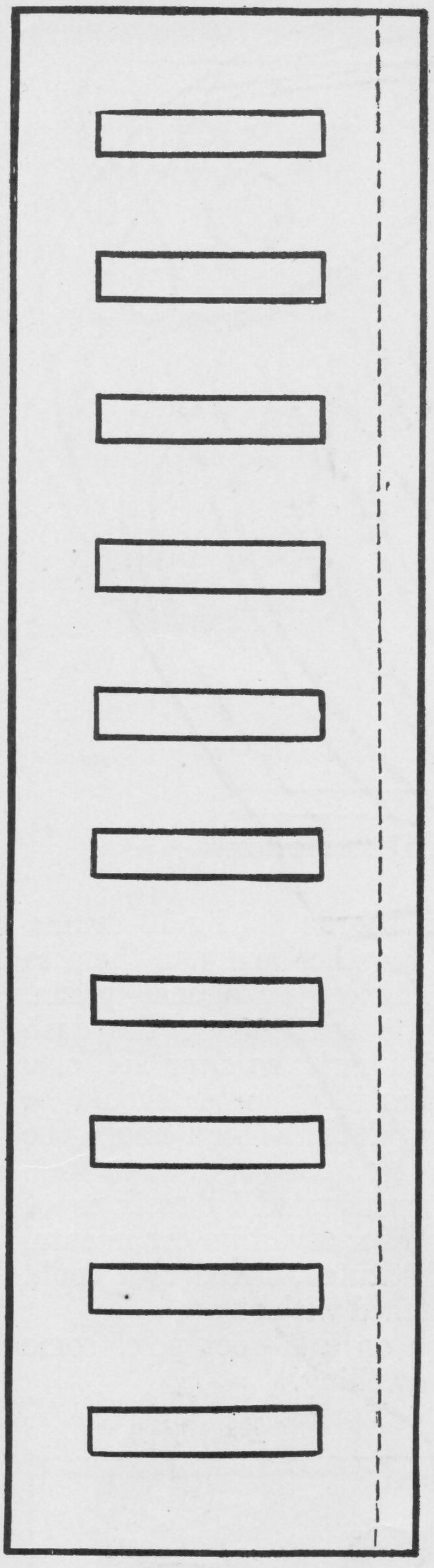
PATTERNS FOR ROCKING HORSE AND MAN



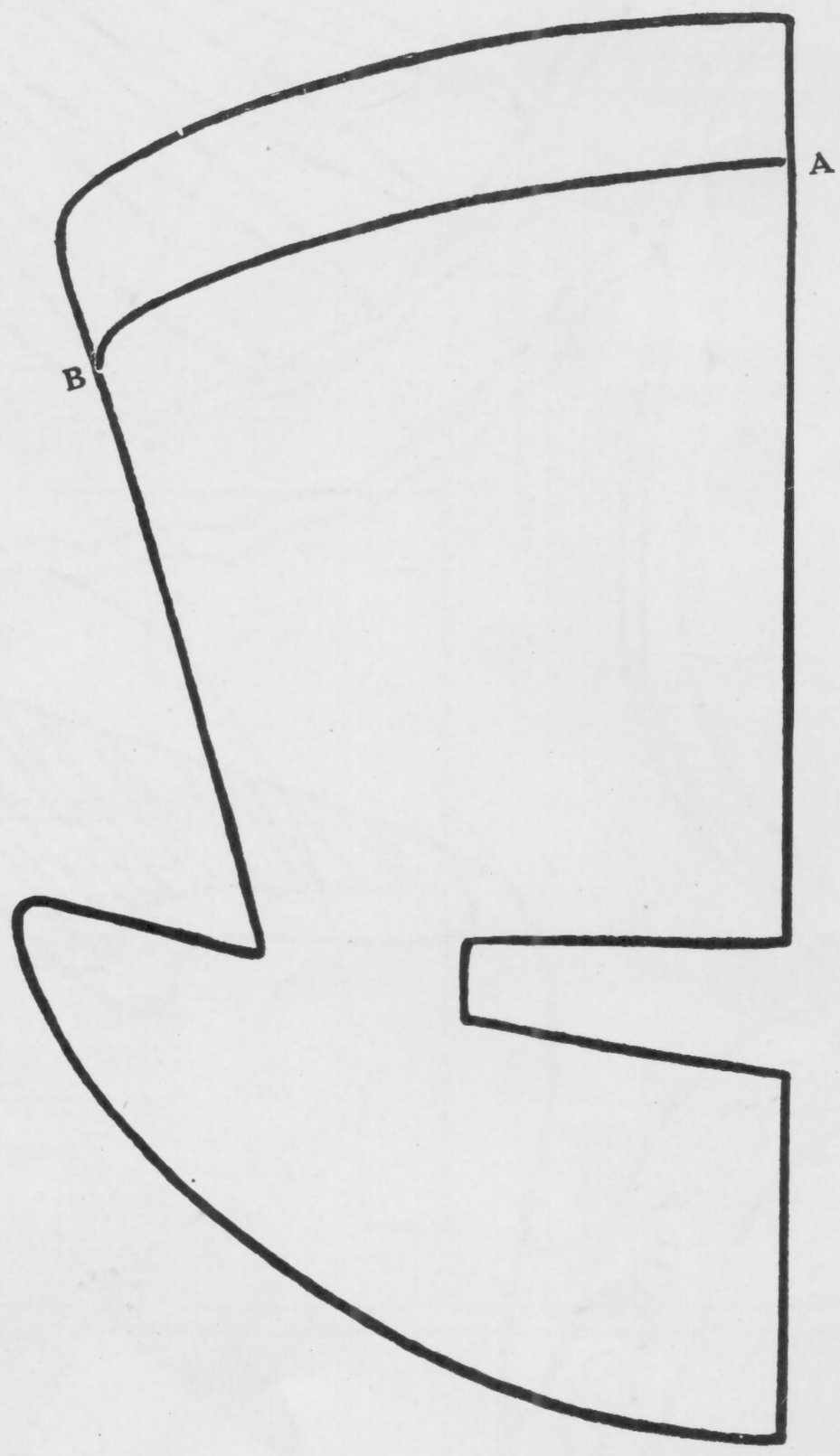
Trace the design on both sides of the wood. With bicycle enamel or water-color, paint the fish black, red and white. The weight holds it upright in the water, and the enamel prevents its warping. The lead weight is attached after being bent in shape.

A FISH THAT SWIMS





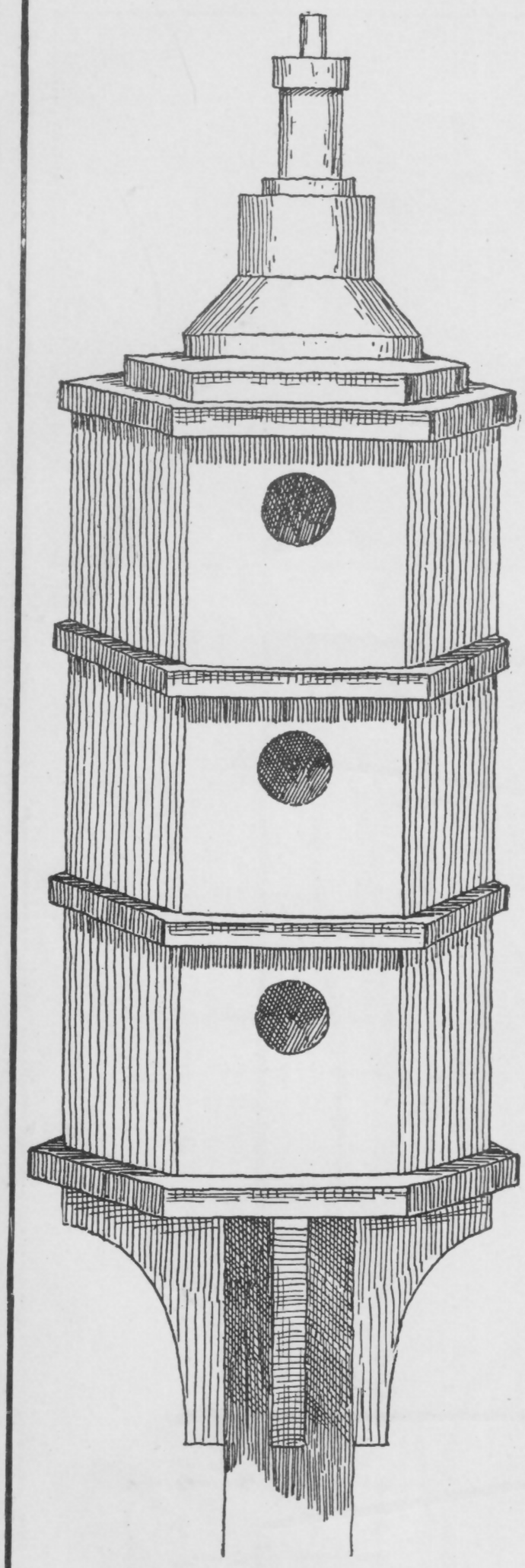
SIDE

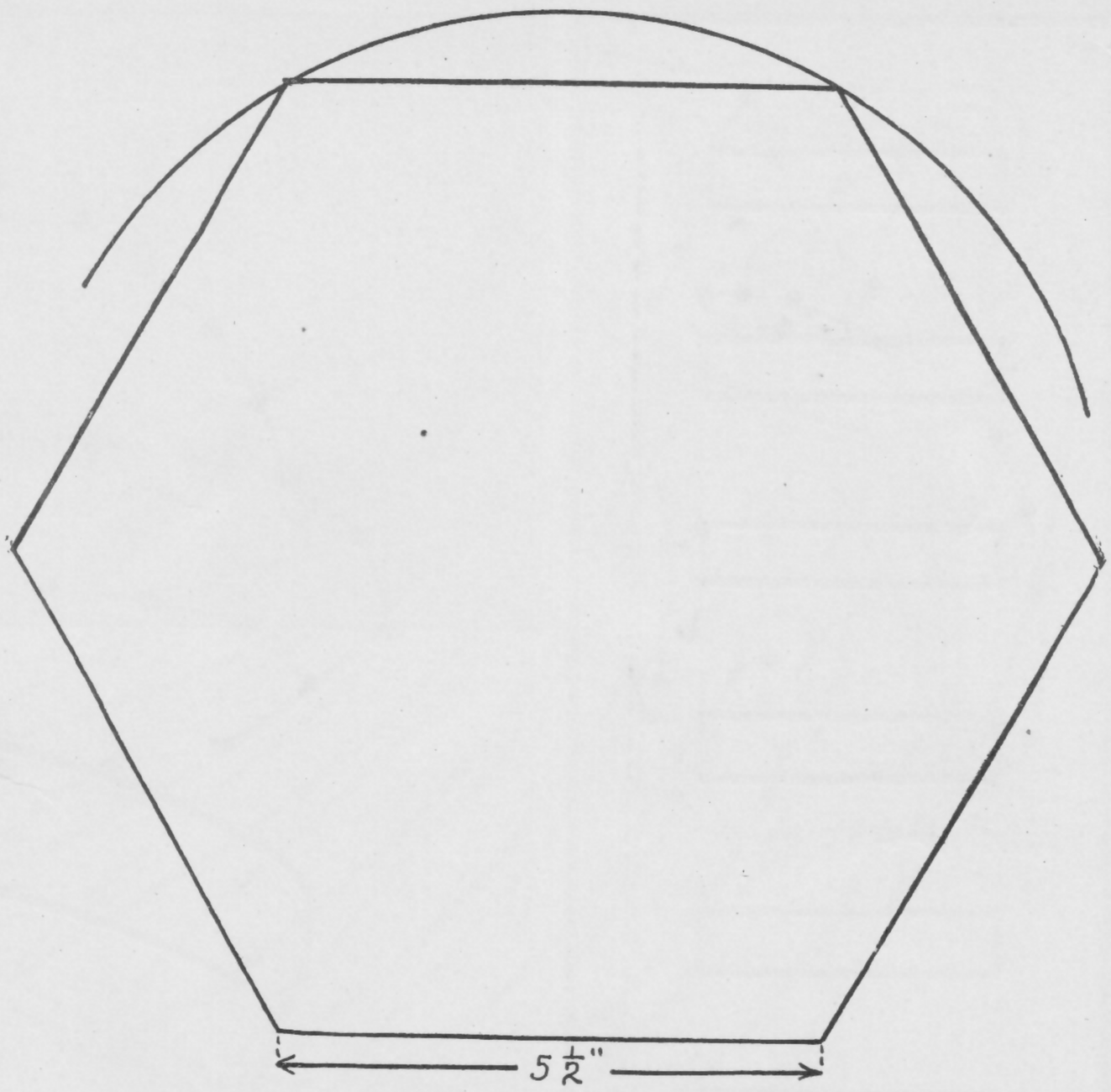


HEAD

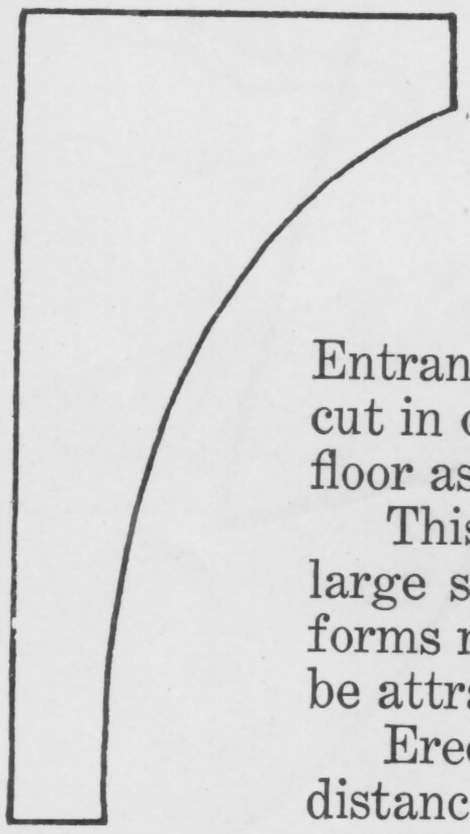
Trace the patterns and transfer to wood. Use the pattern of the head for the foot, except make the foot one-half inch lower by cutting on the line from A to B. The floor may be a solid piece, or slats may be set in, supported by a strip glued along each side.

PATTERN FOR A DOLL'S CRADLE





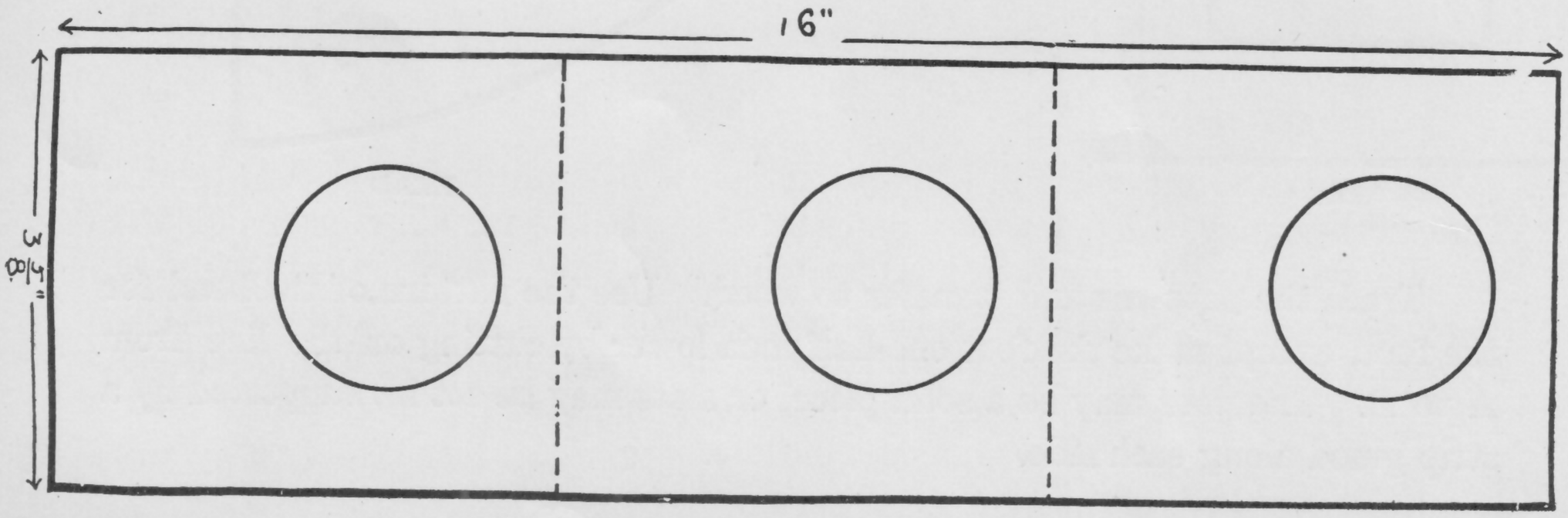
PLAN OF FLOOR SECTION



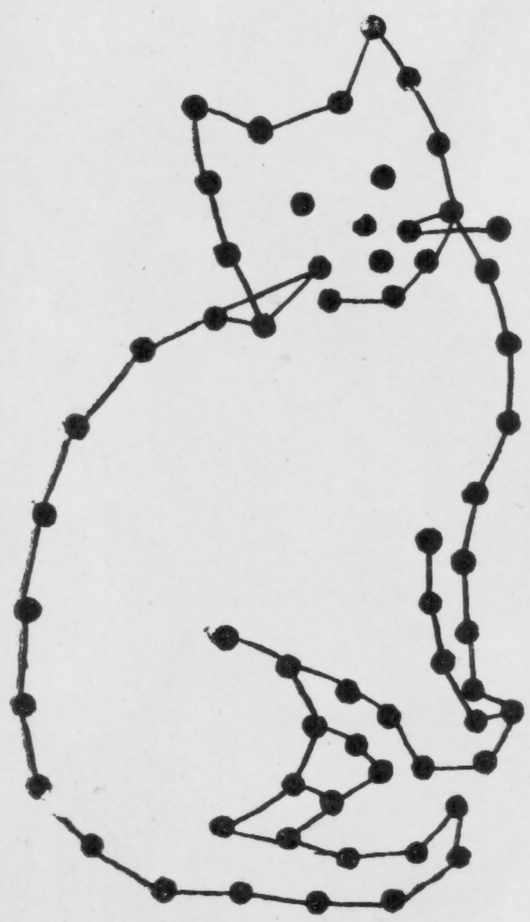
Cut six boards 3⅝ by 16 inches. Fit these together and nail them to form the hollow hexagonal prism. Then saw it apart along the dash lines, and insert the floor sections. Entrances two inches in diameter should be cut in one side only, placed as high above the floor as possible.

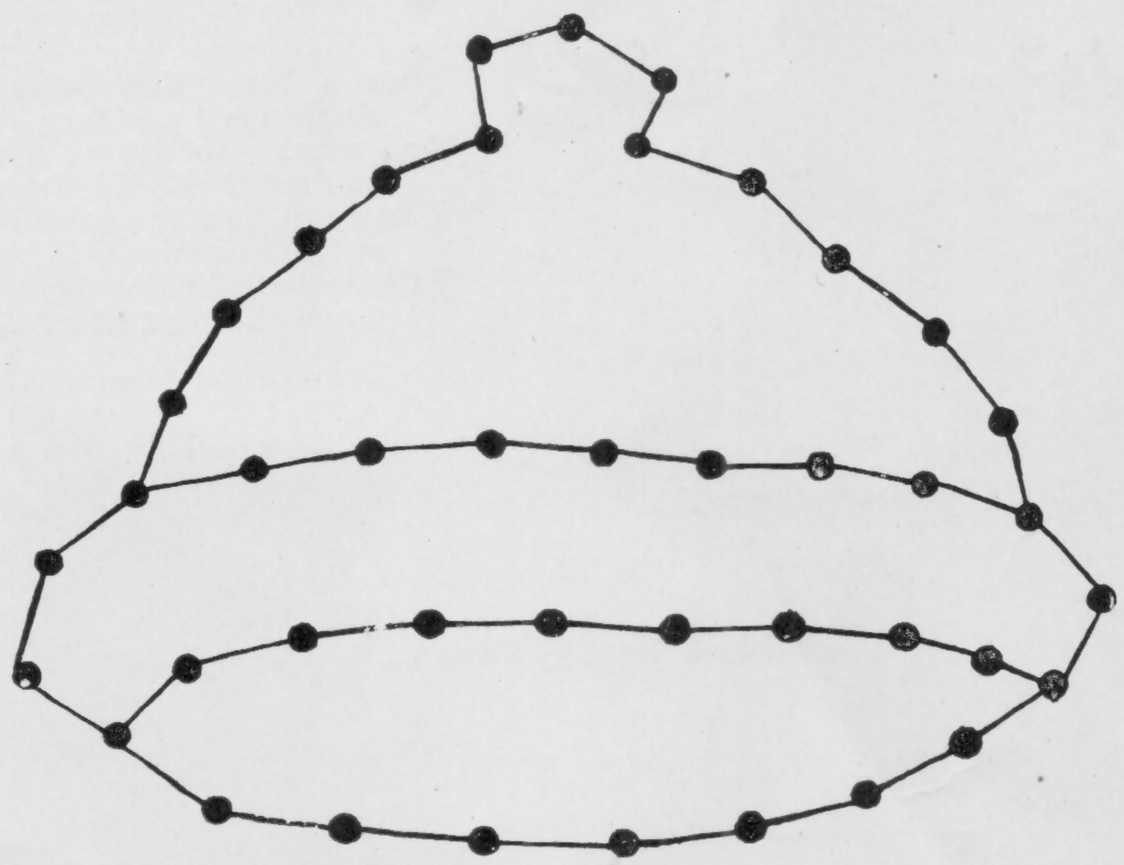
This house is surmounted by sections of large spools. One of many other ornamental forms might be substituted, or the roof could be attractively thatched with straw.

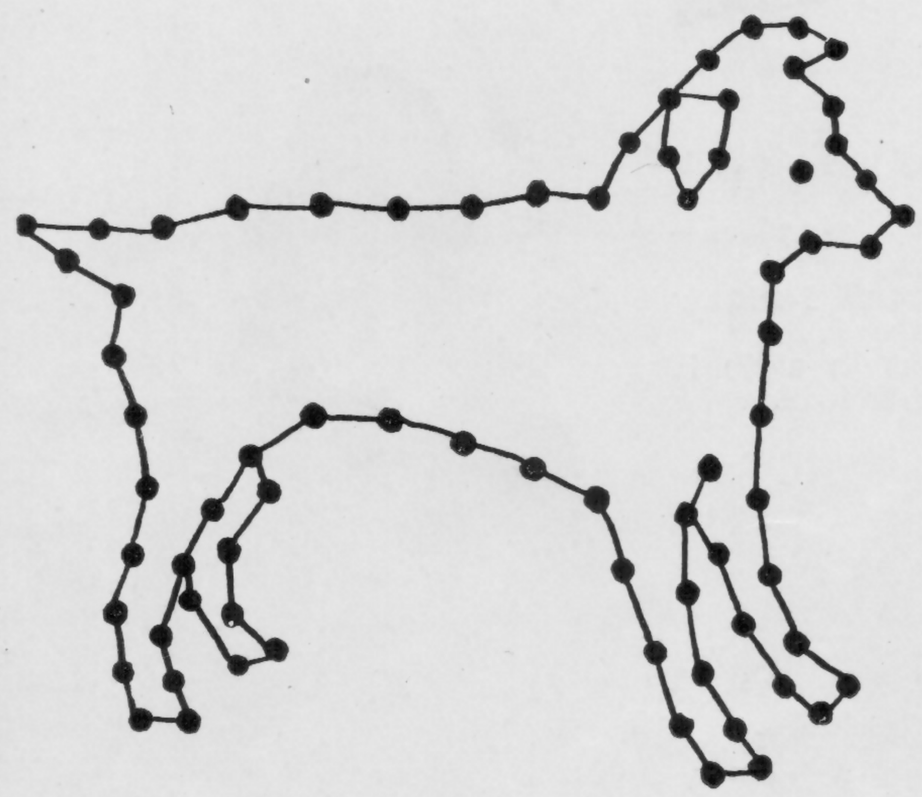
Erect the house on a 20-foot pole, some distance from any dwelling.

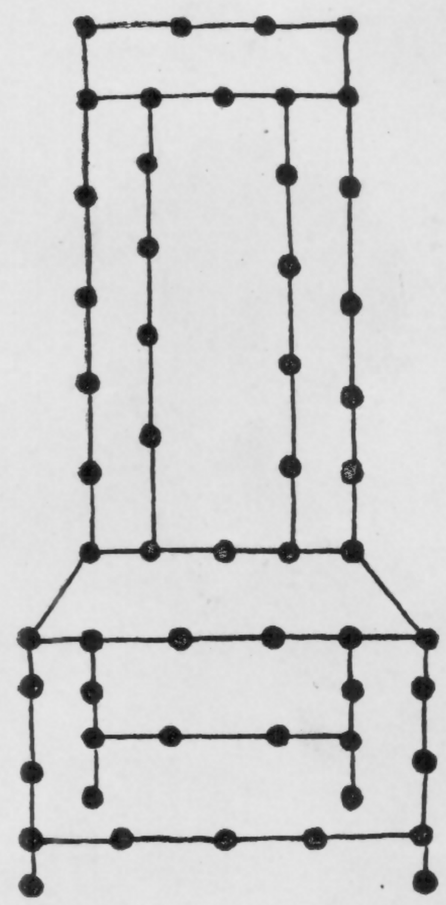


PURPLE MARTIN BIRD-HOUSE









Sewing card outlines will while away many an hour for the young child. The mother may trace the designs furnished on this page and page 356 and transfer them to thin cardboard. Punch holes on the dots with a stiletto used in embroidery work. Thread a good sized needle with "tambo" cotton of any preferred color and show the child how to fill in the outline. The discovery will be made that on the wrong side the thread must pass over the same space twice. The right side shows a single outline.

DESIGNS FOR SEWING CARDS

"Little Women" all Through the Week

I am a little Wednesday girl; the stockings I can darn,
And patch the aprons that I tear, and mend big holes with yarn.
I sew on pretty patchwork, and stitch from morn till night,—
I think that mending day's the best, you make the wrong things right.

I am a little Monday girl; I help the clothes to scrub,
And on my little washing board I rub and rub and rub;
I hang the clothes upon the line, with clothes pins make them fast.
Oh, I am always very glad when Monday comes at last.

I am a little Friday girl; I have a cap and broom,
For I must surely sweep the house, yes, every single room;
And dust the chairs and tables, till everything is clean.
Oh, Friday is the cleaning day, the best I've ever seen.

I am a little Thursday girl; a calling I would go
And leave my card at every place—the ladies all do so.
I have my parasol and fan, my gloves and pocketbook,
Oh, I am always right in style if you should chance to look.

I am a little Tuesday girl; I iron, don't you see,
And never scorch a single thing, I'm careful as can be.
The lace and all the frilly things, why, Mother has to do,
But I can iron the plainer things. I think it's nice, don't you?

I am the girl for Saturday, for then is when we bake
All sorts of cookies, pies and things, and fancy kinds of cake,
And bread and beans and patties, and meat that's tender, too,
Oh, baking day's the best of all. I think so, say, don't you?

"Little Men" in Useful Occupations

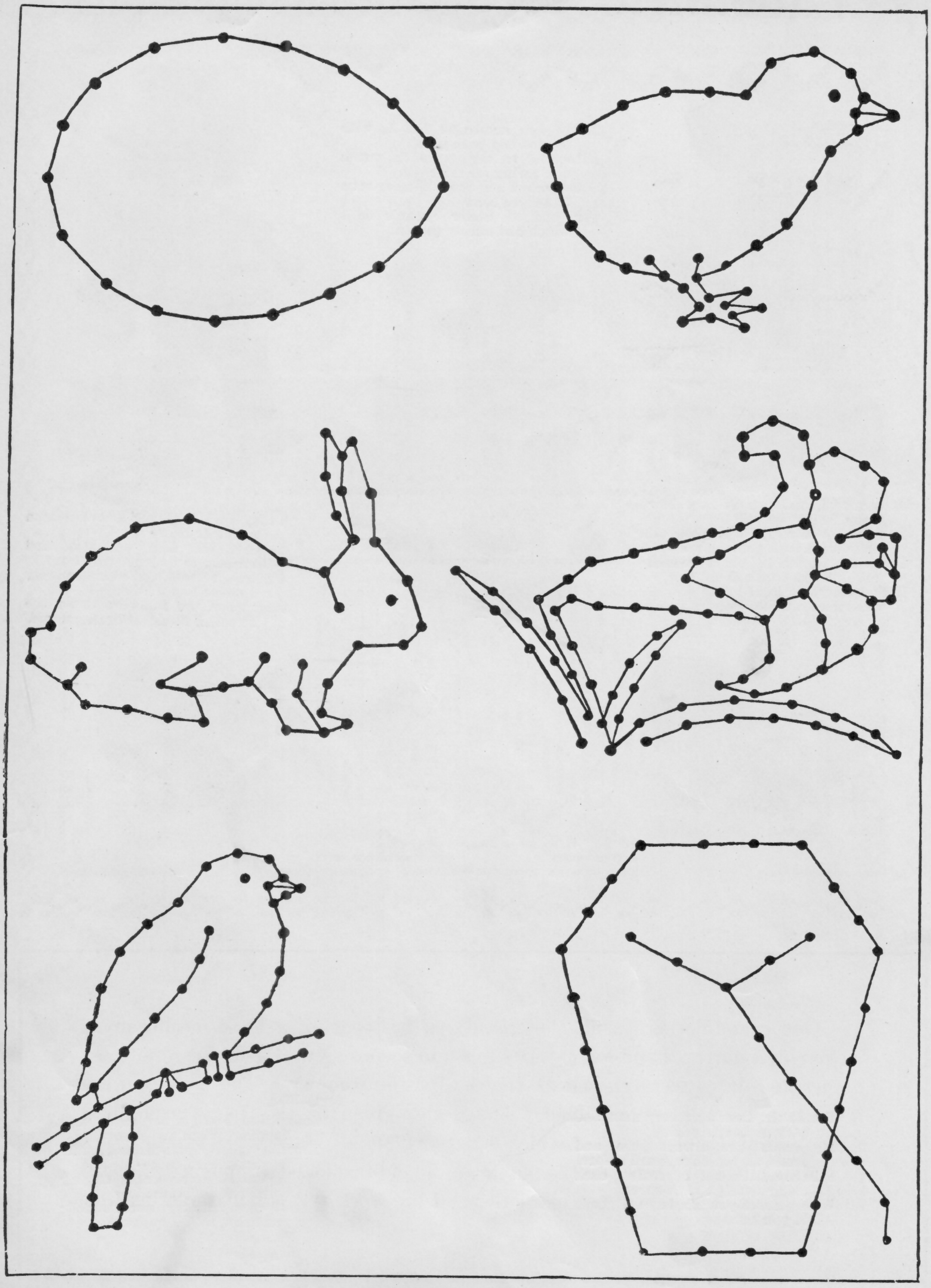
A farmer I, and you will see how
busy I must be
To raise the corn, the wheat and all
that feeds both you and me.
I plow the ground, and plant the seed
and kill the weeds that grow,
Without my work and fruits, you
see, you all would hungry go.

Today I'm known as Dr. X, with
bottles and with pills
Attending to my patient's wants
and curing all their ills.
Sometimes I amputate a leg or set a
fractured bone
For one of Sister Susan's dolls
which has unruly grown.

Today with knapsack and with gun
a soldier brave am I.
Beneath the dear old stars and
stripes, to be most true I try.
I march, retreat, and countermarch,
I never feel afraid,
And when the folks go down the
street, I stand at dress parade.

Please sir, I am a grocery man, and
play at keeping store;
My goods are always pure and
fresh, as you have heard before.
I have a little set of scales, each
thing I weigh with care;
With pennies you can buy my goods
if you have some to spare.

Sometimes I am a carpenter with
hammer, plane and square,
Erecting mighty palaces and build-
ing them with care—
My houses all have porches on, my
barns have cupolas;
I build them for my sister's doll;
you know this, I suppose.

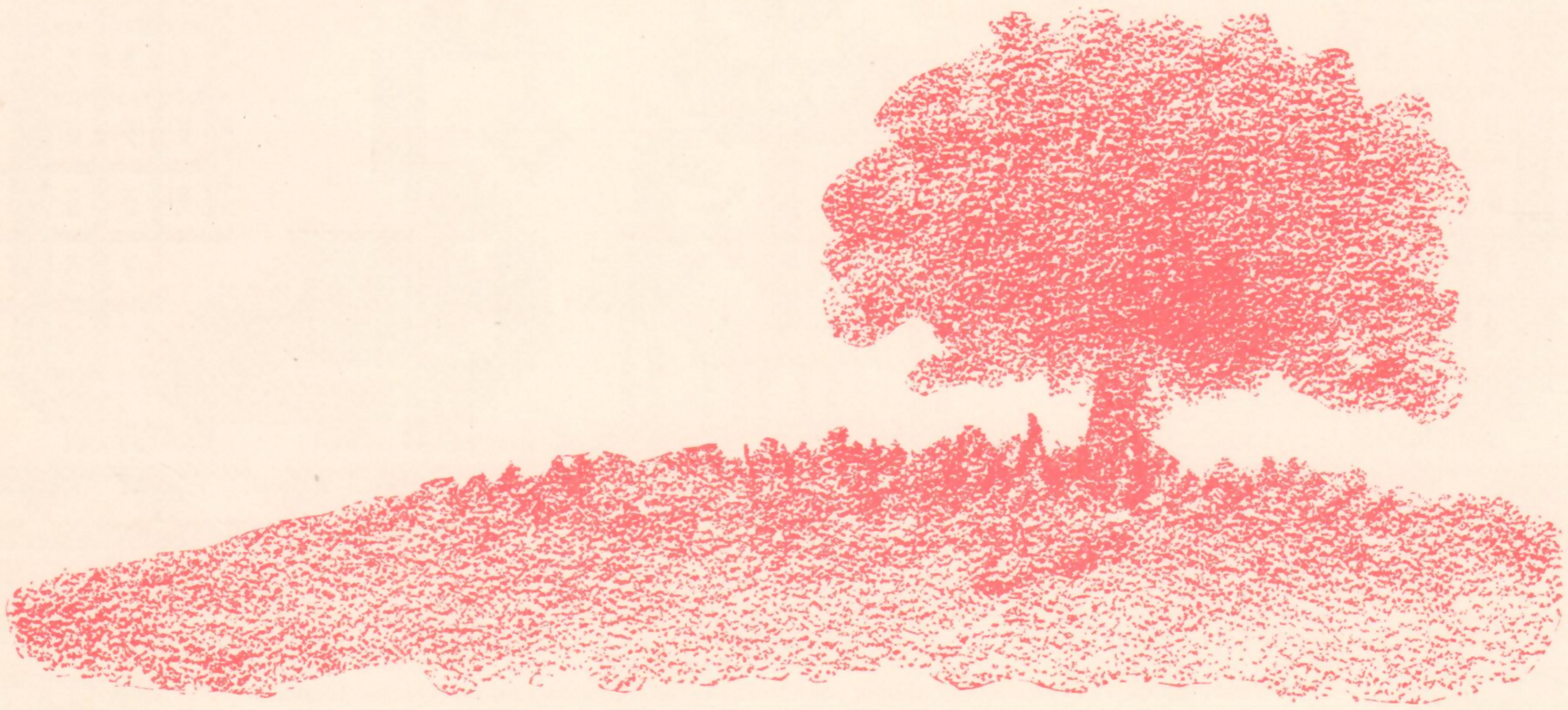


DESIGNS FOR SEWING CARDS

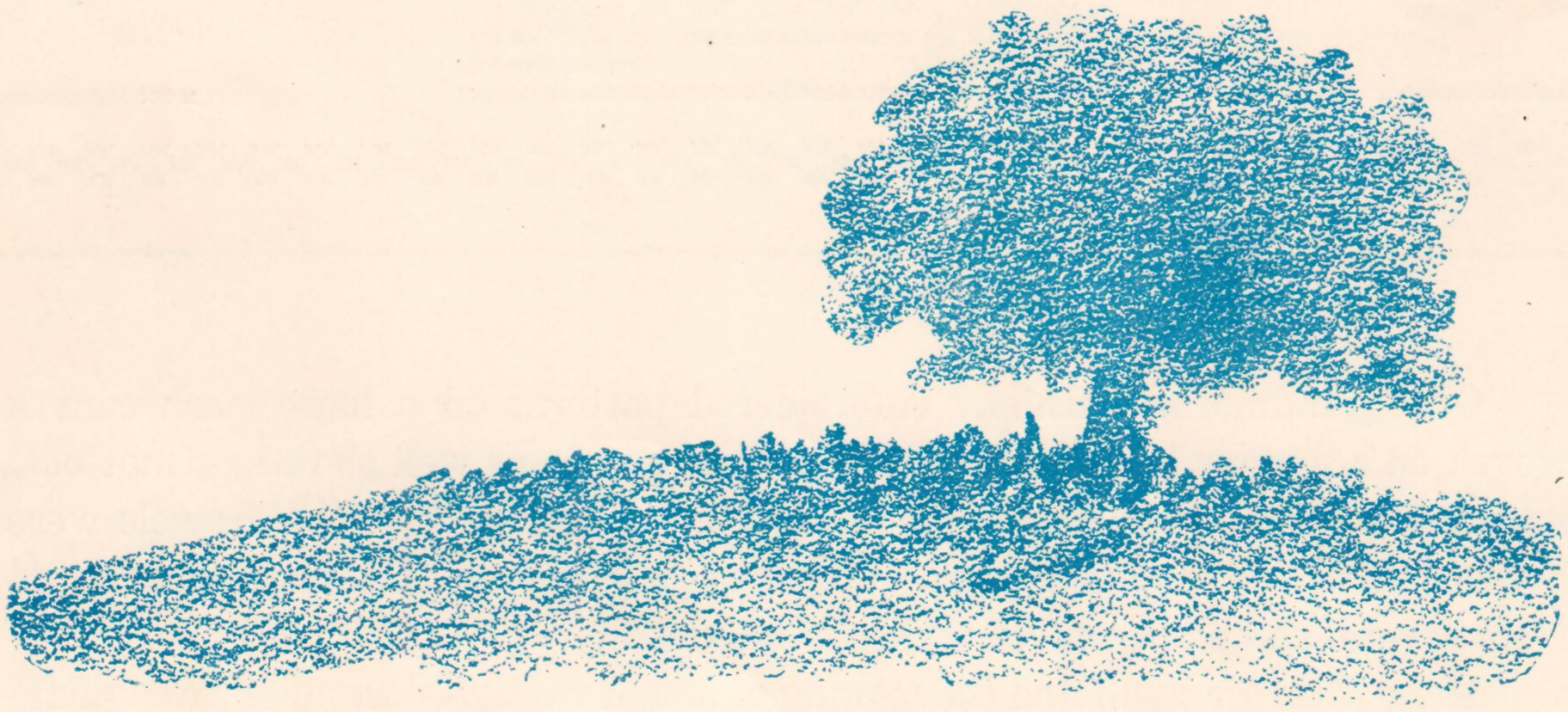
Our grandmothers usually embroidered patterns on a loose mesh canvas woven on a narrow hand loom. Designs and scenes as well as verses, mottoes, names and dates were chosen as themes for the sampler. The crewels were home spun as well as home dyed. The design given on this page is adapted from several samplers, one of which is dated 1780.

Many little girls will find the making of an old fashioned sampler a delightful task. The materials will not be costly, and the work is rapid and fascinating.

A DESIGN FOR A SAMPLER



Colored Plate I



Colored Plate II

Lessons in Drawing

By D. R. AUGSBURG, Teacher of Drawing, Author of "Easy Things to Draw," "Drawing With Colored Crayons" and Augsburg's Series of Drawing Books.

MATERIALS

THE materials necessary for home equipment in drawing are:

Two lead pencils.
Several tablets of drawing paper.
A blackboard.
A box of white crayon.

The pencils should have a large, soft lead. It is best to have two or even more pencils, so that a blunt or a sharpened point may be used as occasion demands. A blunt or worn point is used for broad lines and a sharpened point for finer lines. The lightness and darkness of the lines is obtained by varying the pressure on the pencil point.

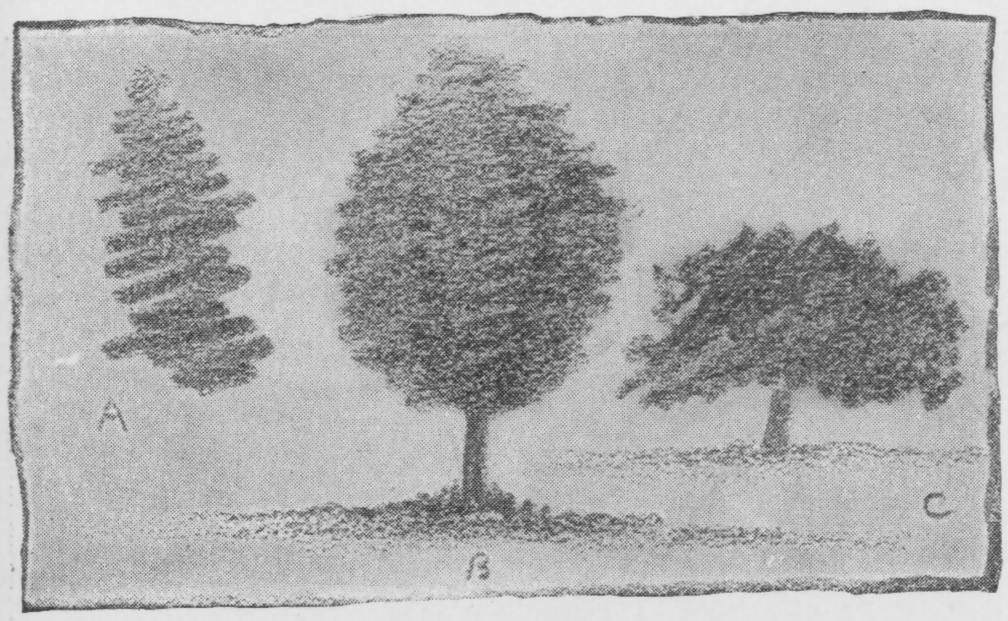


Figure 1

The handiest size of paper for pencil drawings is a tablet four and one-half by six inches. This is large enough for drill purposes and for ordinary work with the pencil. Larger sizes may be used if needed. Any kind of drawing paper may be used. Both paper and blackboard should be employed. The paper is for small drawings and the blackboard for large drawings requiring full arm movements.

Procure a blackboard three feet wide and five feet long. Place it firmly against the wall, at least three feet from the floor. A good rule to follow is to place the lower edge of the board twelve inches below the collar of the one who is to use it. The child should reach up and place the drawing above the collar rather than below in a cramped position. Use the best grade of dustless white crayon.

There is no place equal to the blackboard for drill purposes in drawing. The largeness of the surface gives freedom, its publicity stimulates to effort and creates confidence, and the large full lines lead to precision and grace. Economy, efficiency, and freedom and rapidity of movement characterize blackboard drawing.

DRAWING A TREE

Trees are excellent objects for first lessons in drawing, on account of the freedom of stroke required and the large lines necessary to represent the tops. Use a blunt pencil point so as to make large lines, like those in A, Figure 1. With a free stroke, mass in the top or crown of the tree as shown in B, then add the trunk, and lastly, the ground under the tree.

Use a strong black line. The heavy black lines

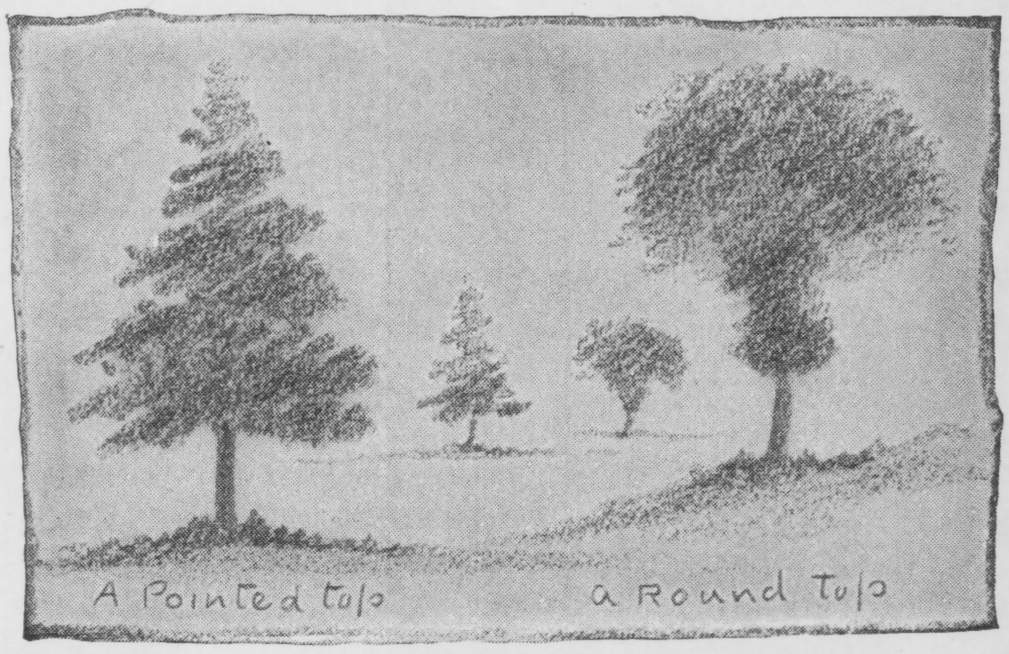


Figure 2

are the most difficult to acquire, so learn to use them at the beginning of your work. First, get the stroke as in A, then draw the tree as in B. B is an oval shaped tree and C is a broad tree. Practice both of them until you can make them with some freedom.

Pointed Top and Round Top Trees. When representing trees, make the boughs appear as if they came out from the trunk, which may be taken as the center of the tree. Do not outline the tree before drawing it as this hinders the freedom of movement, but rather draw the tree direct. Begin at the top of the tree and work downward. Make the trunk darker than the top or foliage part of the tree. Practice these two trees until you can draw them freely, and from memory. You will now have four trees to use; a round tree, a broad tree, a pointed top tree and a round top tree.

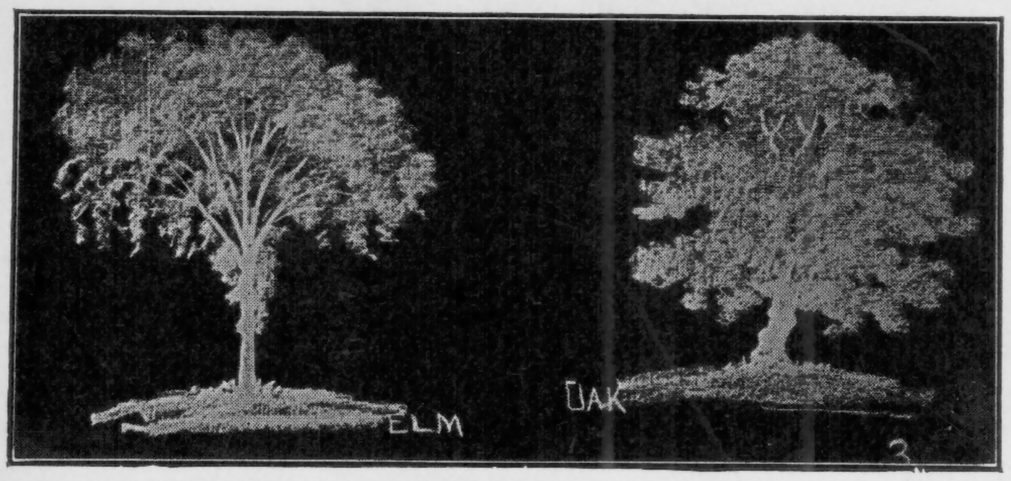


Figure 3

Trees on the Blackboard. When drawing trees on the blackboard, use the side of short pieces of crayon to mass in the top, and use the end of the crayon for the trunk and details. By grasping the crayon between the thumb and three fingers, a line ranging in width from a fine to a broad line can be made by simply tilting the crayon. Learn to draw on the blackboard a round tree, a broad tree, a pointed top tree and a round top tree.

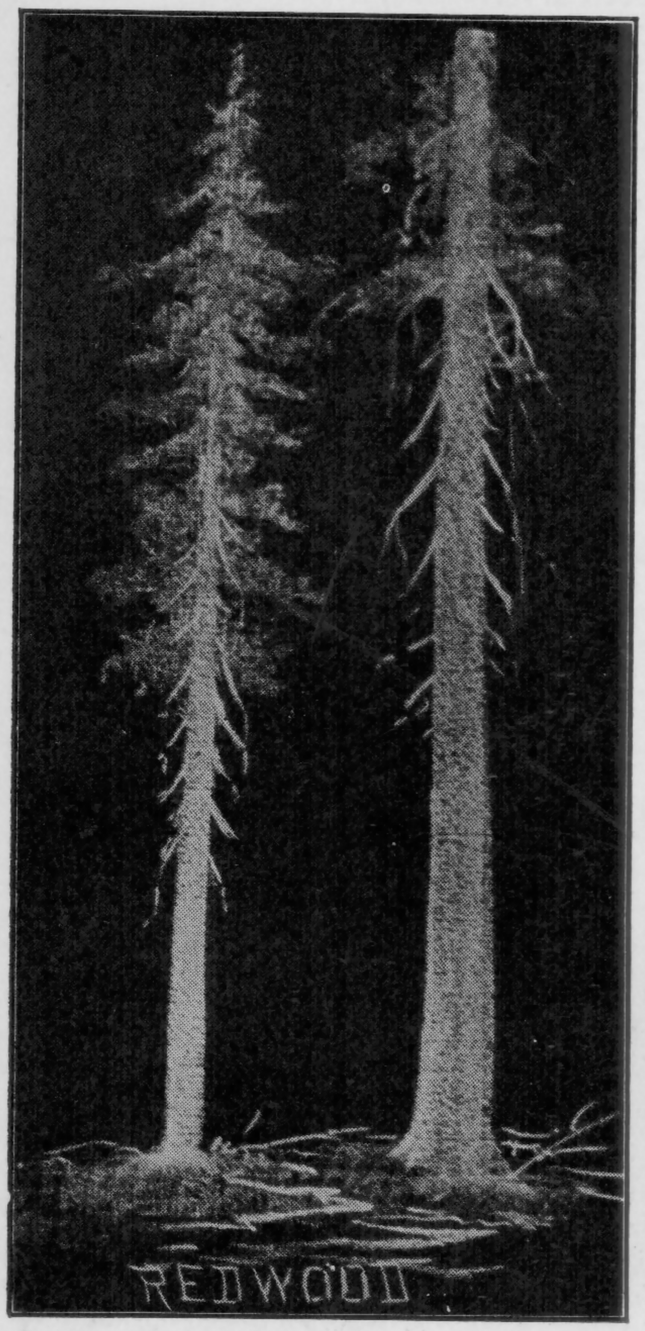


Figure 4

Drawing Tree-Trunks on the Blackboard. The two trees in Figure 4 are California redwoods, great trees with trunks straight as arrows and much like our eastern white pine.

These tree-trunks can be represented on the blackboard by using the side of a short piece of crayon. They can be represented almost with one stroke of the crayon. Of course, the limbs and details are drawn with the end of the crayon.

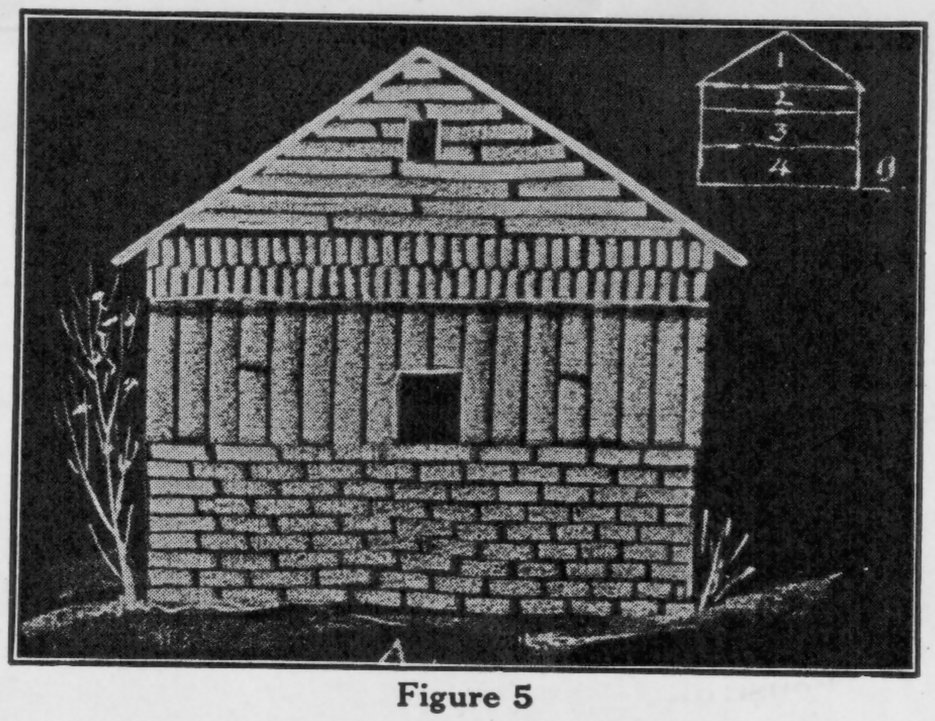


Figure 5

Practice drawing these tree-trunks on the blackboard until you can draw them with some degree of facility. These represent very much the same principle as most evergreen trees, and by learning these it will aid in extending the principle to others.

LEARNING BROAD LINES

It is well to learn how to use broad lines, both on paper and on the blackboard.

Mark out this drawing about two feet long, with light lines as shown in B, Figure 5, the small drawing in the corner. Then, with the side of short pieces of crayon, mark in with single strokes the shingles, boards, and stone work. Use strong firm lines. On paper the blunt point of the pencil can be used. Hold the pencil as in writing.

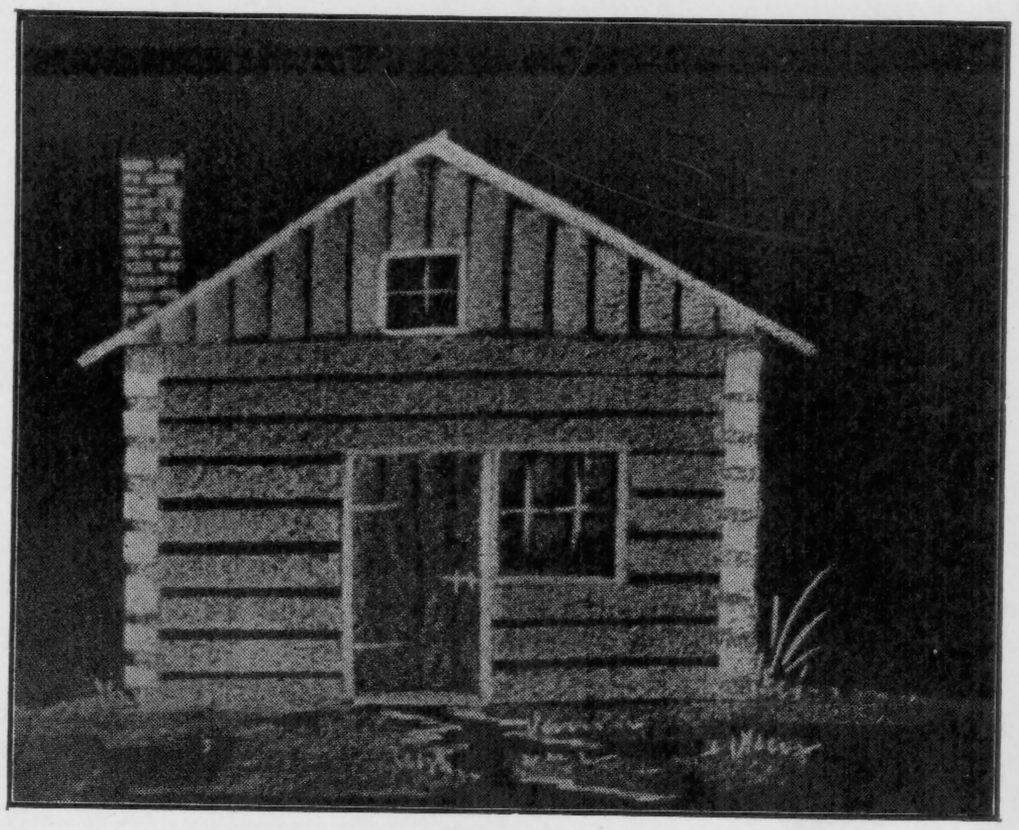


Figure 6

The trees that you have learned may be introduced into your drawing, at the right and left of the building.

A Log House. The house in Figure 6 is made with the side of the crayon. Use a piece about an inch long. Make the lines strong and firm. First, mark out the house with light lines and then fill in with the broad lines, using one stroke for each board or log. The windows and doors may be made with the eraser or they may be made separately.

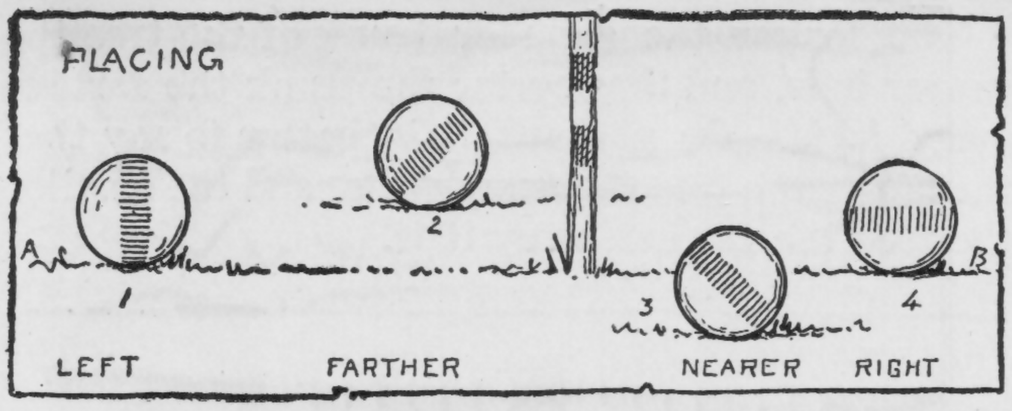


Figure 7

Figures 4, 5 and 6 may be combined. The house may be drawn and then the redwood trees placed right, left, farther or nearer, at pleasure.

The house may be drawn on paper with the blunt end of the lead pencil. The tree-trunks may be drawn in the same way.

Placing

One of the first things to learn in drawing is how to place objects in the picture. You see, everything must have a place to rest. There are four principal resting places and they are shown in Figure 7. In this drawing there is a croquet post, and through the point where it is driven into the ground is a line marked A B. Objects resting on this line are right or left of the post. Objects resting above this line are farther than the post, and objects resting below this line are nearer than the post.

In the drawing there is one croquet ball at the left of the post, one at the right, one farther and one nearer.

Draw the croquet post. Place one ball at the left of it, one at the right and one farther.

Draw the post and place one ball at the left, two farther and one nearer. Practice placing these balls until you can do it without much trouble.

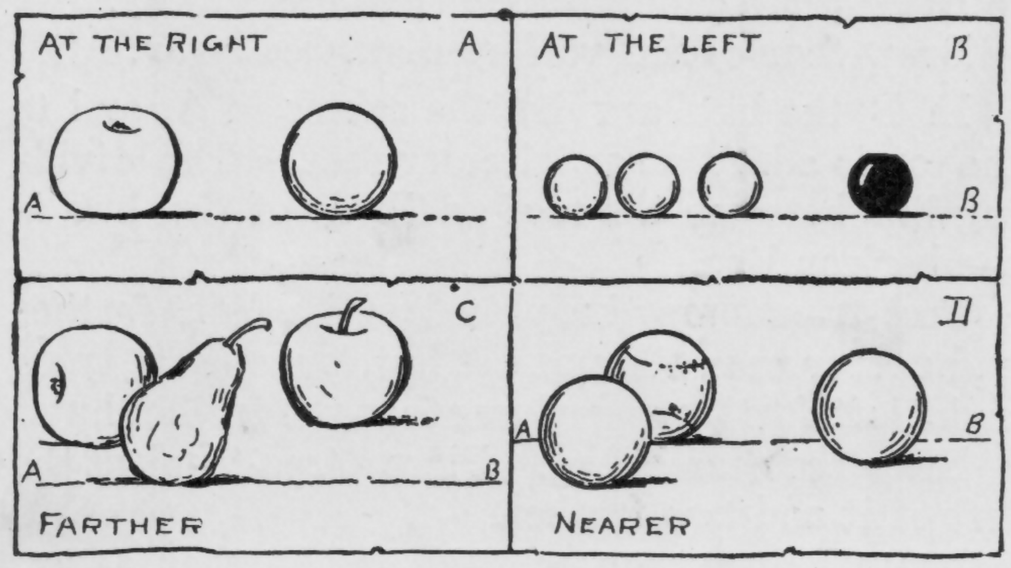


Figure 8

PLACING OBJECTS

In A, Figure 8, there is a ball at the right of the apple, in B there are three marbles at the left of the black marble, in C there are two apples farther than the pear, and in D there are two balls nearer than the baseball.

Drawings are usually made with lines. It is not well to use only one kind of line in drawing, any more than in speaking to use only one tone of voice. Learn to use at least three lines, a light line, a medium line and a heavy line. The heavy black lines are the most difficult to learn. One must bear down hard on the pencil to make black lines, and hard on the crayon to make heavy white lines on the blackboard. In the following exercises use heavy black lines on paper and heavy white lines on the blackboard.

Draw an apple and place two balls at the right.

Draw an apple and place one ball at the left and two at the right.

Draw an apple and place three balls farther.

Draw an apple and place two balls nearer.

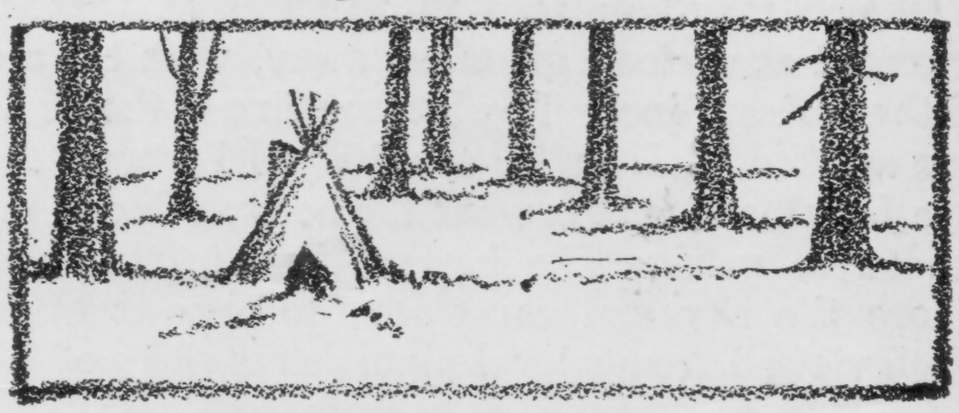


Figure 9

Draw a black marble and place two white ones at the left and one at the right.

Draw a black marble and place one white one at the left and three farther.

Draw a black marble and place one white one at the right, one at the left, two farther and one nearer.

Draw a pear and place two apples farther.

Draw an apple and place two pears farther.

Draw a pear and place one apple at the left and two farther.

Draw a baseball and place one ball nearer and one farther.

Draw a baseball and place one farther, one at the left and one nearer.

Draw an apple and place a pear farther and a baseball at the right.

Placing Trees around a Wigwam. In Figure 9 there is a wigwam with one tree at the left of it, one at the right and six farther. Strive for the principle. Try to see that this simple way of

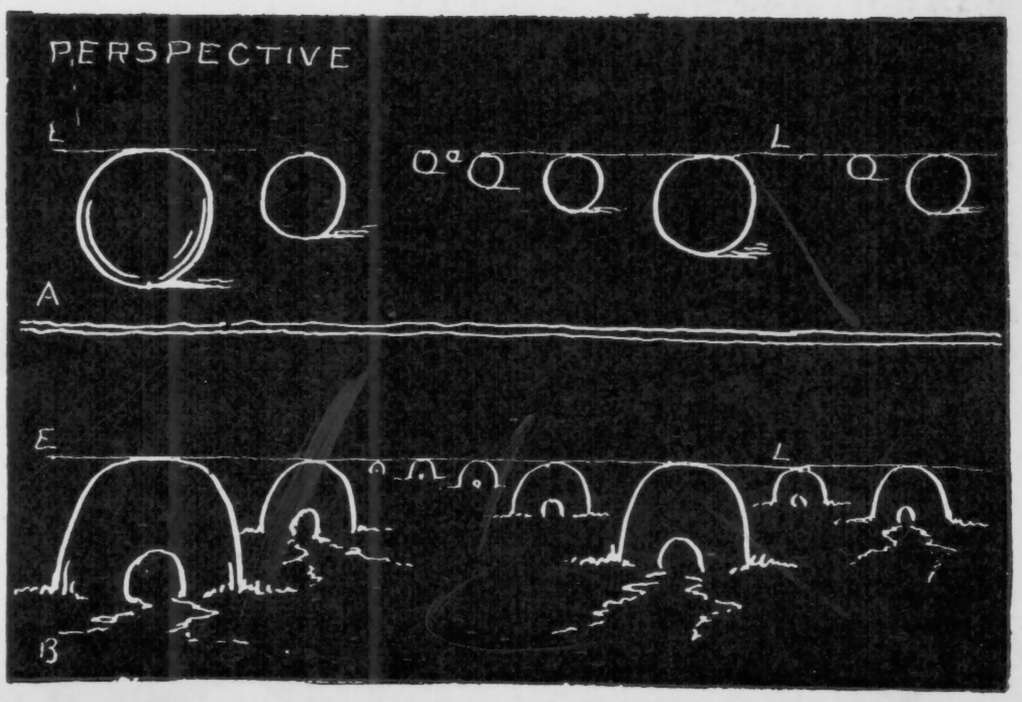


Figure 10

placing is just as true in a great painting as it is in these simple drawings; that this principle is of universal application.

Use strong black lines for the tree-trunks. The placing is the same as that in Figures 7 and 8.

Draw a wigwam and place a tree-trunk at the left and two farther.

Draw a wigwam and place a tree-trunk at the right and three farther.

Draw a wigwam and place one tree-trunk nearer, one at the right and five farther.

PLACING OBJECTS IN PERSPECTIVE

Objects may be placed in perspective, that is, arranged at various distances away, with the aid of the horizon line. The horizon line is the light line marked E L in Figure 10. E L stands for Eye Level, and that is what the horizon line is intended to mark. The horizon line is that line where the sky and earth seem to come together when viewed from a level plain or the shore of the ocean, and in drawing is represented by a light horizontal line.

In A, Figure 10, the top edge of each of the balls is made to touch this line. When this is done, it does not make any difference how large or how small the balls are drawn, they are always

Figure 11

in perfect perspective, and seem to be various distances away. The larger the balls the nearer they appear, and the smaller the balls the farther they appear.

Draw the nearer balls with heavy lines and those farther away with lighter lines.

Draw three balls various distances away.
Draw five balls various distances away.
Draw seven balls various distances away.
Draw nine balls various distances away.

B, Figure 10, shows semicircular huts that are drawn in the same manner as the balls. Use heavier lines for the nearer huts and lighter lines for those farther away.

Draw four huts various distances away.
Draw six huts various distances away.
Draw seven huts various distances away.

Trees in Perspective. Trees may be drawn in perspective by placing the top or leafy portion of the tree above the horizon line and the trunks below, as shown in Figure 11.

The longer the stem or trunk of the tree the nearer it is, and the shorter the trunk the farther away it is. Or perhaps it is better to say that the larger the tree the nearer it is, and the smaller the tree the farther away it is.

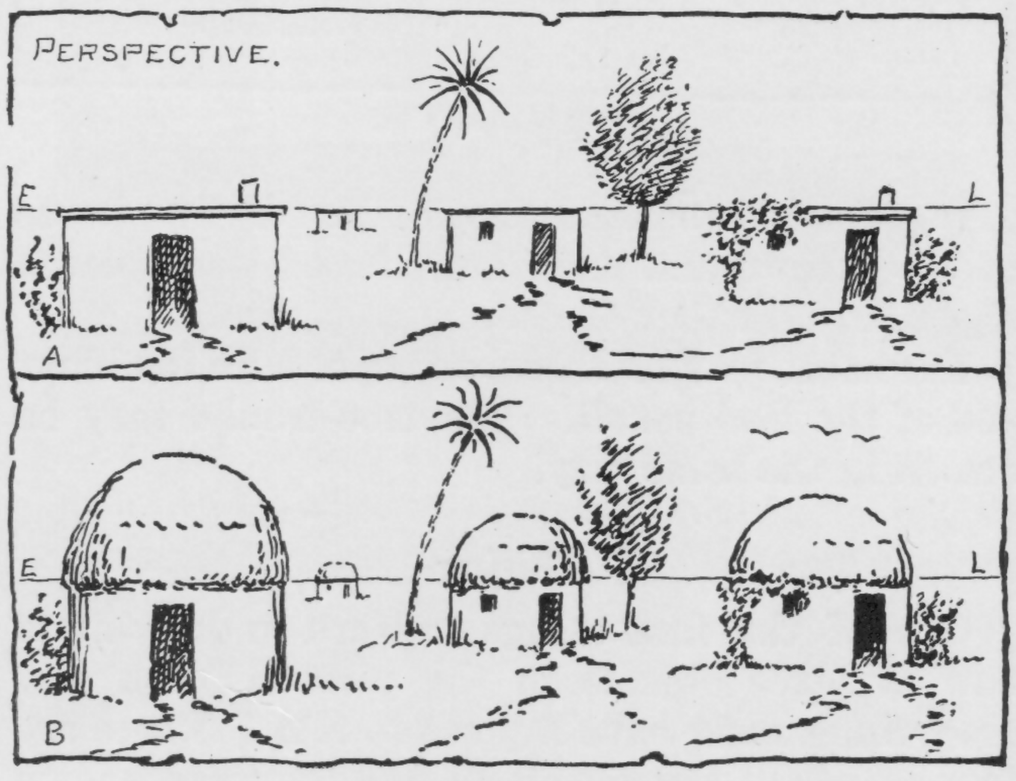


Figure 12

Draw three trees various distances away.

Draw four broad trees various distances away. (See Figure 1.)

Draw five pointed top trees various distances away. (See Figure 2.)

Draw five round top trees various distances away. (See Figure 2.)

Houses in Perspective. In A, Figure 12, are four rectangular shaped cabins drawn various distances away. They are drawn in the same manner as the balls in Figure 10, that is, the top line of the cabin touches the horizontal line. The farther cabin has a tree at the left of it and one at the right.

Draw three cabins various distances away.

Draw four cabins various distances away.

In B the huts are like the cabins in A, and to the top is added a semicircular roof. The dividing line between the roof and body of the hut is the horizon line.

Tree-trunks may be placed right, left, farther and nearer than the nearest hut, and whole trees right, left, farther and nearer than the farther huts.

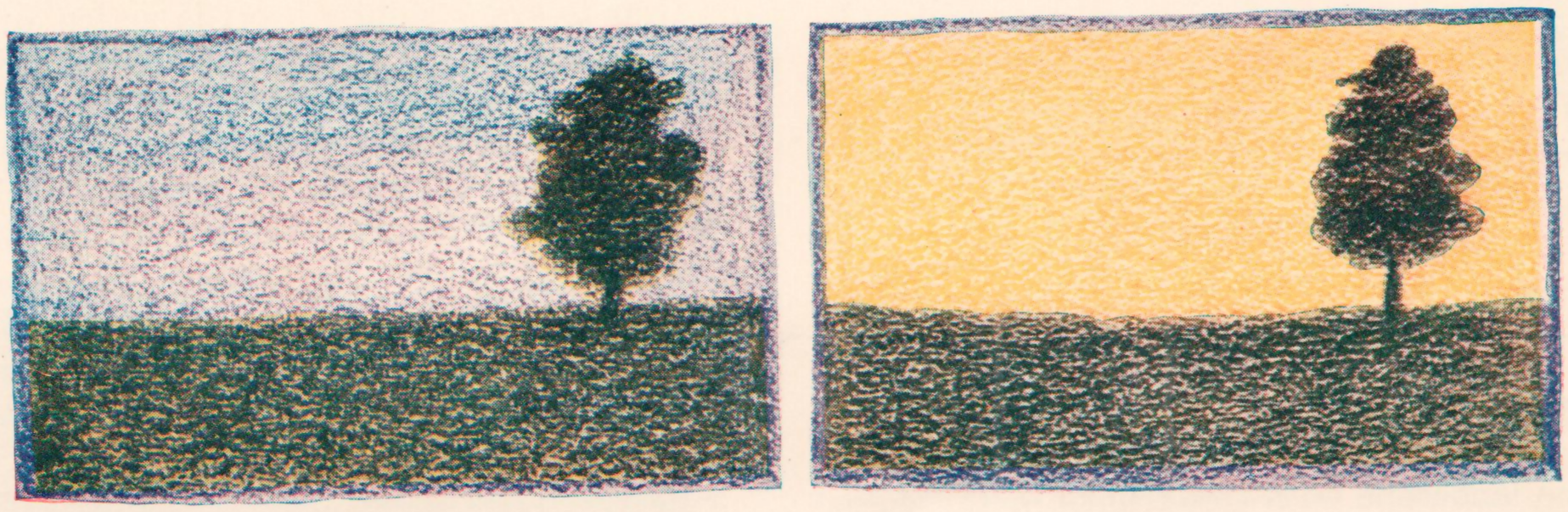
Draw the nearest hut. Place a tree-trunk at the left of it and two farther.

Draw a hut near by and one farther away. Place a tree at the right of the farther hut and two trees beyond.

Draw three huts different distances away.

Of course, objects in nature are not seen, ordinarily, with the top or a definite part of the objects on a level with the eye. They are so represented here as a part of a method to learn how to draw objects in perspective. Trees and houses in nature would show various parts on a level with the eye, but to learn how to show perspective we must have a definite plan or method.

Colored Plate III



Colored Plate IV

LANDSCAPES

All love to draw landscapes. They are indeed, exceedingly interesting to draw and pleasing to look at.

In general, a complete landscape has four parts, sky, distance, middle distance and foreground, as shown in A, Figure 13.

The term sky explains itself. Distance is that part of the landscape that is far away, such as distant mountains and hills. Middle distance is that part that is nearer than the distance and farther away than the foreground; the foreground is the nearest part of the landscape, the part that is close to the observer.

In Figure 13, A represents the parts of the landscape. The mountain and the lake would, in general, be called the distance.

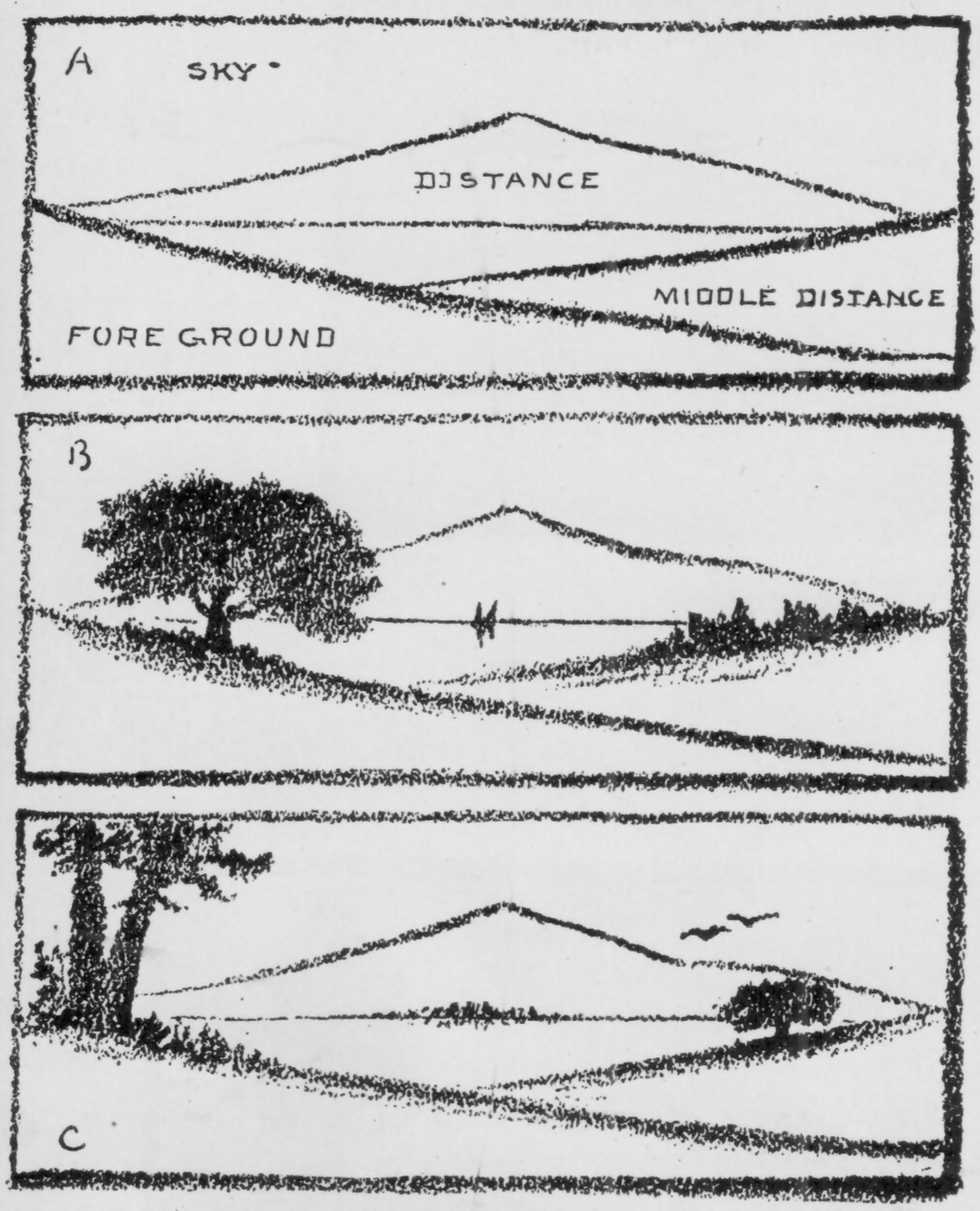


Figure 13

B is the same landscape with a tree in the foreground and a wood in the middle distance; C is the same landscape with tree-trunks in the foreground and a tree in the middle distance. These landscapes may be drawn about five inches long on paper and thirty inches long on the blackboard.

Parts of Landscapes. A landscape need not have all of the parts shown in Figure 13. A, in Figure 14, has only two parts (not counting the sky), B has two parts and C only one. Try to represent the following:

Draw the middle distance only of A, Figure 14.

Draw the middle distance of landscape B.

Draw the middle distance of landscape B, Figure 13.

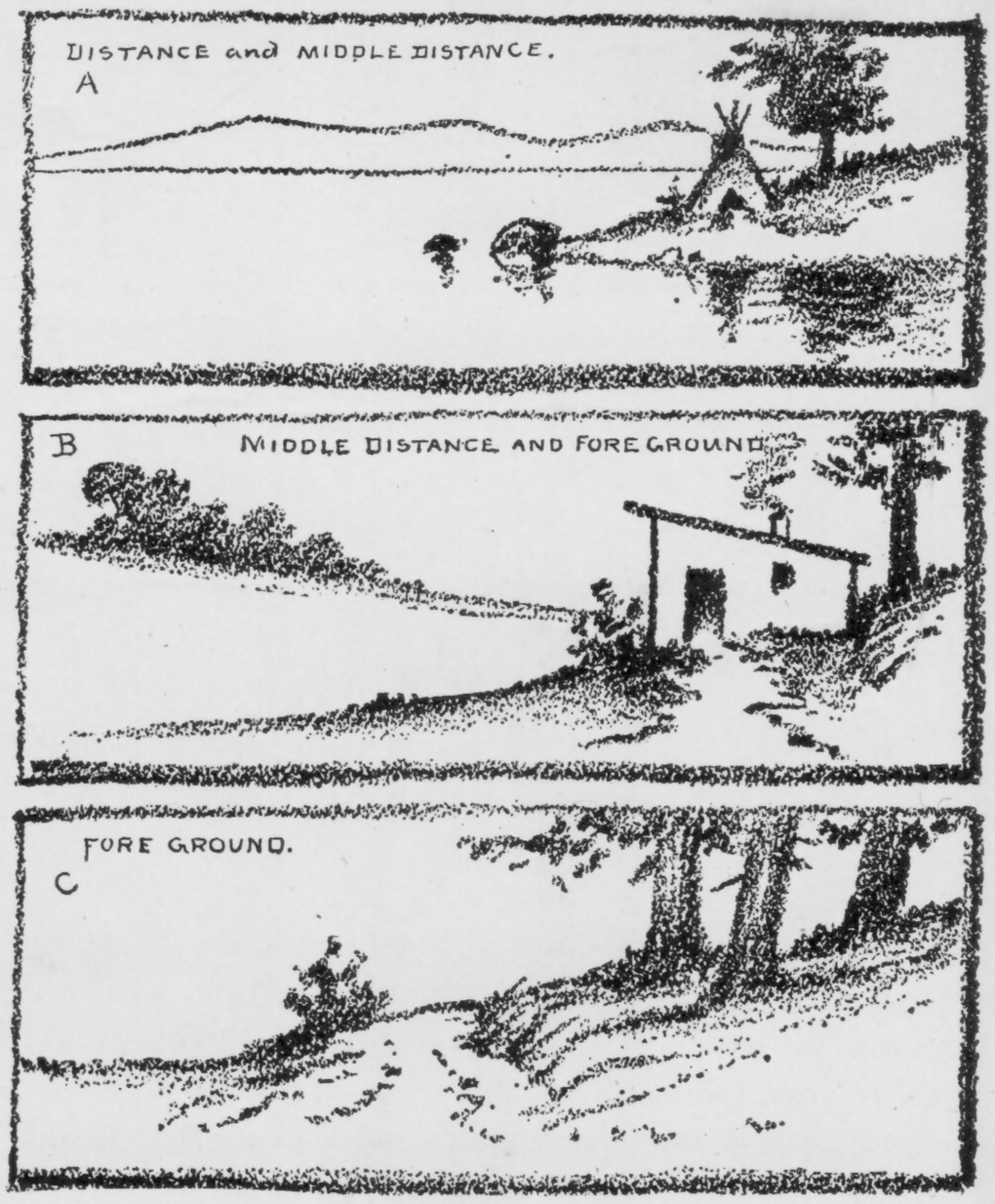


Figure 14

Draw the foreground of landscape B, Figure 13.

Draw the foreground of landscape C, Figure 13.

Draw the foreground of landscape B, Figure 14.

Draw landscape C, Figure 14.

Draw the middle distance and distance of B, Figure 13.

Add distance to C, Figure 14.

Action

Dear to every child's heart is action or movement. Perhaps the representation of movement gives more pleasure to boys and girls than any other branch of drawing.

In Figure 15 there is an ostrich, a boy and a deer. The ostrich is standing still, the boy is walking and the deer is running.

The ostrich is standing still. Observe that the long legs and the long neck of the ostrich are vertical. The fact that they are vertical is what

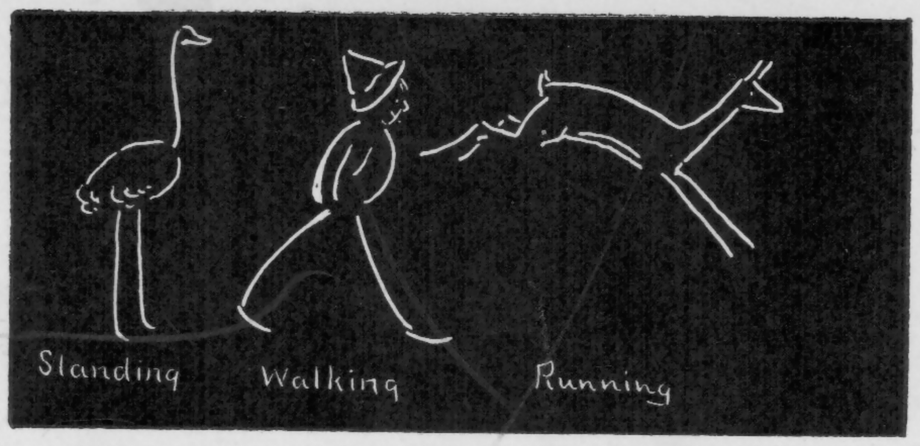


Figure 15

makes him stand still. In drawing as well as in actual life the vertical line expresses stillness. It is the "still line," and wherever it is used its

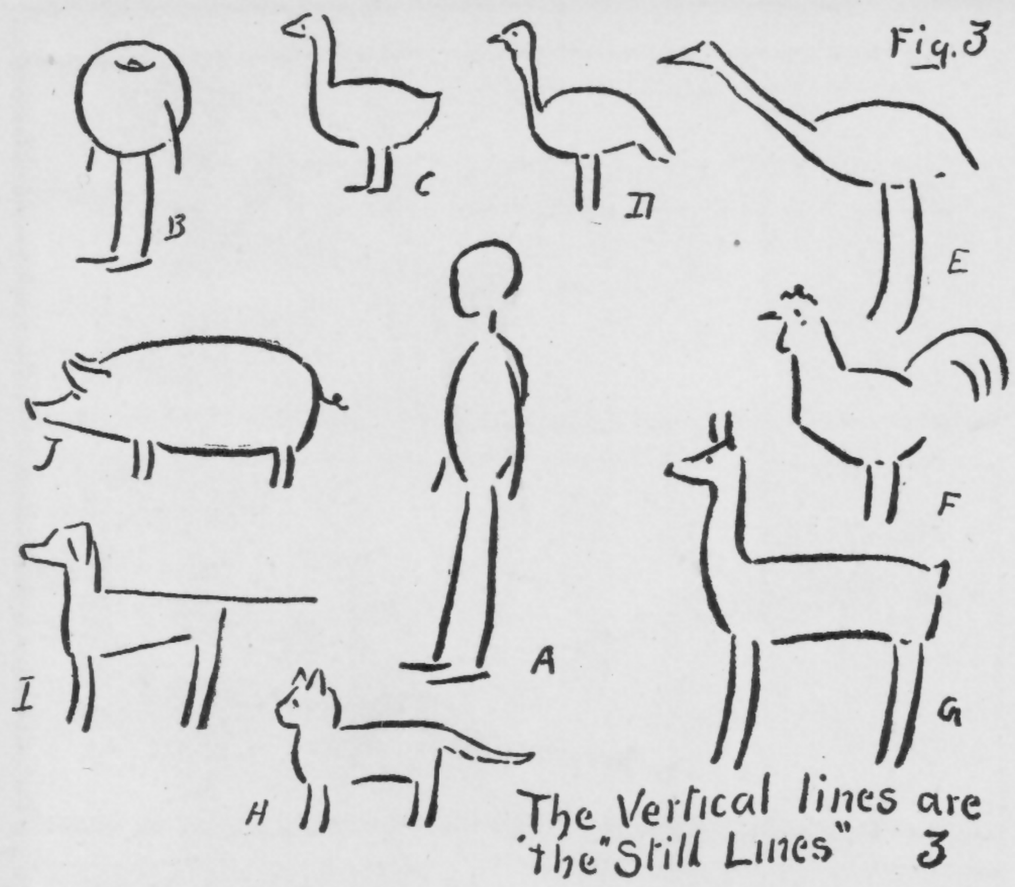


Figure 16

expression is that of lack of motion; that is, quiet.

The oblique line more than any other line expresses motion. The boy is walking, and you will observe that the legs are oblique. The deer is running, and the legs, body and neck are all oblique. The oblique line is the "go line" of drawing.

See if you can make the ostrich run.
See if you can make the ostrich walk.
See if you can make the ostrich stand.

Make the boy stand still.
Make the boy walk.
Make the boy run.

Make the deer run.
Make the deer stand still.
Make the deer walk.

THE ACTION OF STANDING

As the vertical line is the line of stillness, this line must predominate in standing figures. In Figure 16 you can see that this is so.

The central figure, A, is the typical action of standing, and around it are various birds and animals, each expressing the same action. Observe that the ostrich, E, has made his neck oblique, and notice how this imparts a little movement to the figure. Action is impersonal, hence the apple, B, can be made to stand the same as an animal.

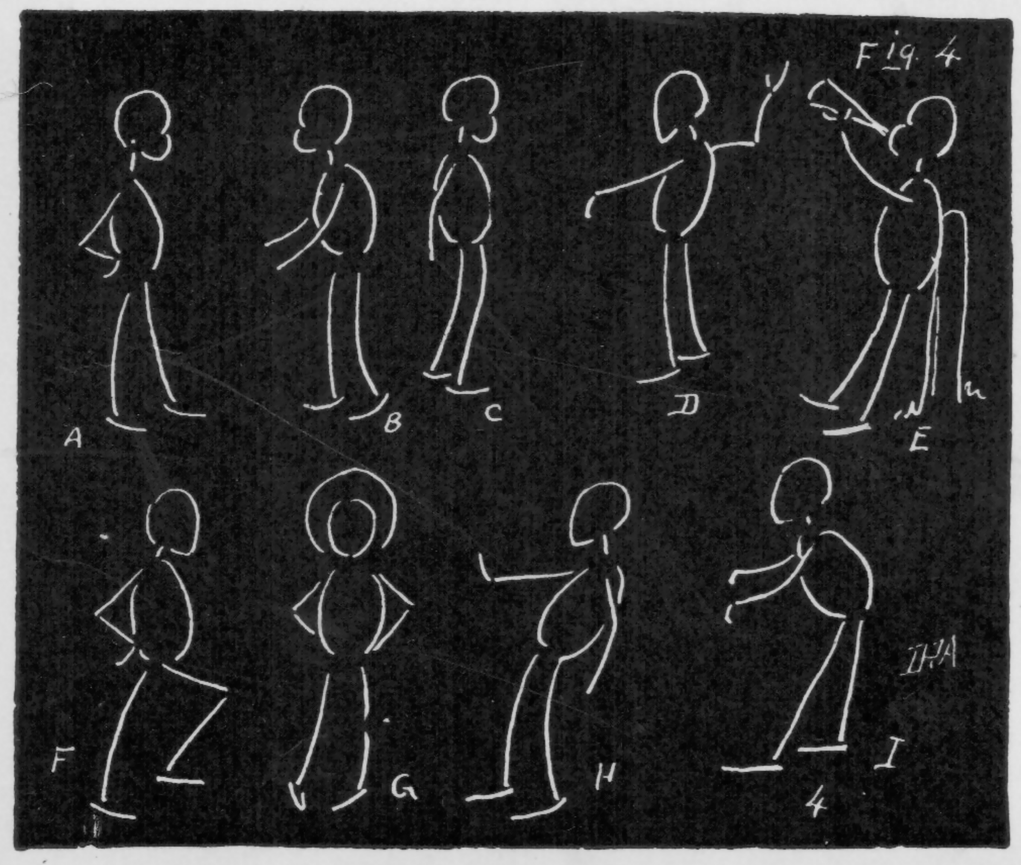


Figure 17

Make an apple stand.
Make the goose and the turkey stand.
Make the deer and the ostrich stand.

Make the rooster and the cat stand.
Make the dog and the pig stand.
Make the boy and the dog stand.

Ways of Standing. There are many ways of standing, as may be seen in the blackboard drawing, Figure 17. Figures A and B are talking, D is speaking a piece and C is listening to him. E is tooting a horn and the others are performing various actions.

An action is best learned through the copy. By imitating these actions and by studying the principle back of them, one soon learns how to represent action.

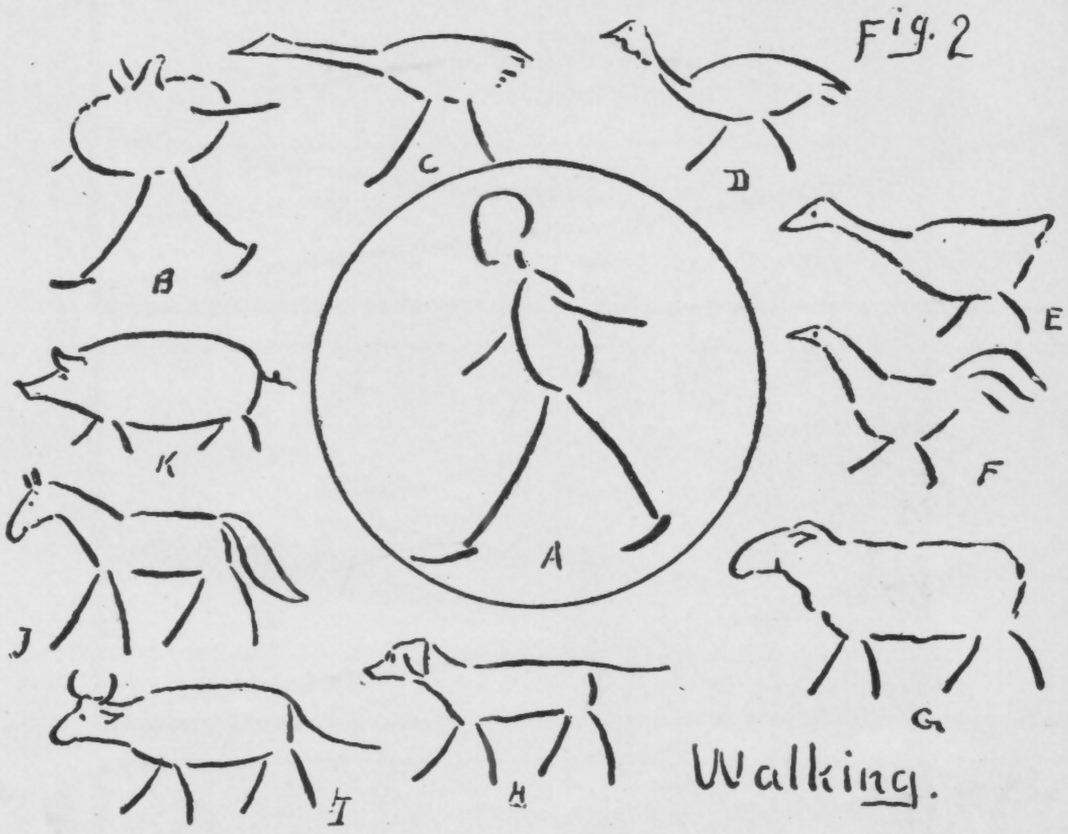


Figure 18

Draw the little figures about three inches long on paper and about sixteen inches long on the blackboard. Represent the following standing actions.

Represent a boy catching a ball; flying a kite; tooting a horn; speaking a piece; looking at a balloon; looking on the ground; pointing upward; pulling a rope; pushing. Represent two boys talking.

THE ACTION OF WALKING

An action can hardly be learned from the object that expresses the action, but rather from the way others have expressed it. Action is not a thing but a movement, and as such is impersonal. A stick can be made to walk as readily as a boy. The turnip, B, Figure 18, is walking. An action is revealed through the direction of lines.

The boy, A, is walking. We may say that it

Colored Plate V

Colored Plate V-a

Colored Plate V-b

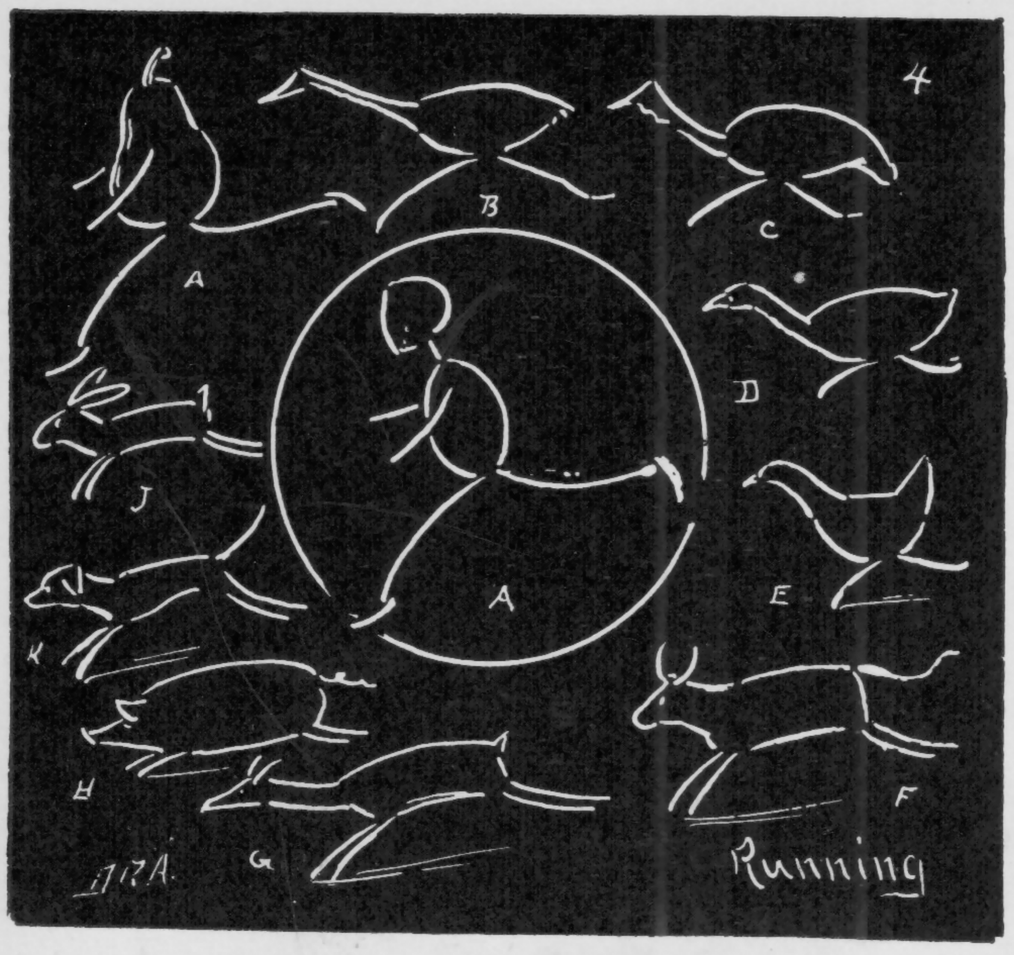


Figure 19

is a typical walk, and this same action is applied to the birds and animals that surround him. Draw the boy walking, and then in succession apply the same action, or walk, to each bird and animal. The principle is the essence of the action. Look for the principle.

Draw the boy walking and then draw each bird and animal, all the time trying to understand the principle of walking.

Represent a boy walking with a basket on his head; carrying a rock; pulling a cart; leading a dog; walking fast; walking slowly.

THE ACTION OF RUNNING

The boy, A, Figure 19, is running; surrounding him are birds and animals with the same action. With the four-footed animals the two front legs are taken as one and the two hind legs as one. This makes the action of running for them the same as in the two-legged figures. The pear, A, is made to run as though it were alive, thus showing that movement is not a part of the object.

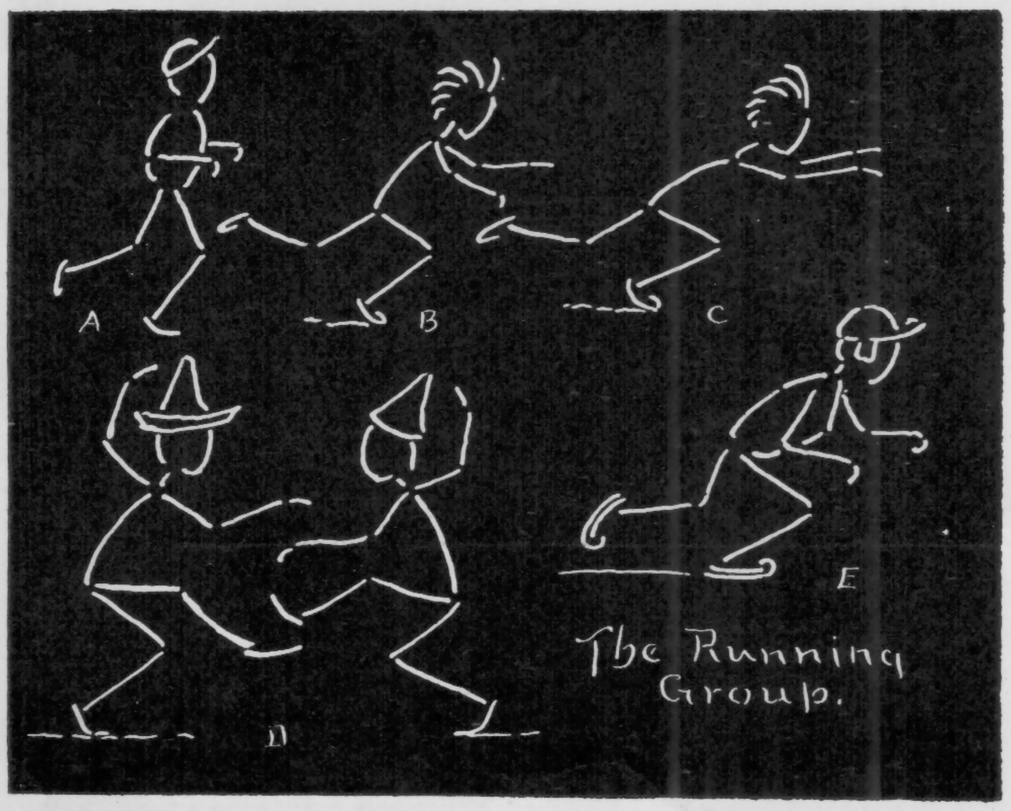


Figure 20

Character, which is often mistaken for the action, belongs to the object, or to the individual, but the movement itself is impersonal. For example, the action of running is common to all animals, but the character of the run varies with each individual. One easily distinguishes the run of a dog from that of a cat or rabbit. We learn the character from the individual, but the action itself is best learned from the copy. We can learn the general action of running by imitating the action in these figures; do not blindly copy them merely to make a drawing, but have in view the learning of the action itself. Learn the action by repeating it until learned.

Ways of Running. In Figure 20 the first three figures show degrees of running. The boy with the cap is running slowly, the Indian boy, B, is running faster, and boy, C, is running faster still. This is done through the slant of the lines. The vertical line is the line of stillness; there is no motion in it. Slant it slightly and it suggests movement; slant it still more and the movement is increased, just as it is in a falling pole or tree, the nearer it approaches the horizontal the faster it travels.

Observe that the elbow joints and the knee joints are represented in these figures. These

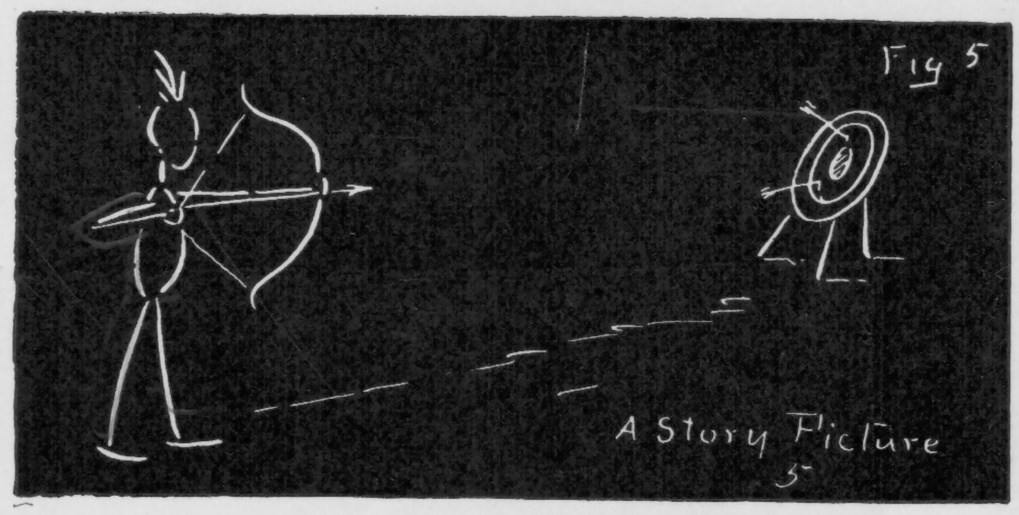


Figure 21

joints may be shown by a space, for a space may represent an idea as well as a line.

There are five forms of action. They are standing, walking, running, sitting and reclining. Around these five may center nearly all action. For example, the actions of skating and dancing are phases of running. As a little fellow said, "Dancing is standing still and running, and skating is running on skates."

STORY PICTURES

A story is always interesting, and so these story pictures may be made a source of never ending delight. After some skill has been acquired in drawing the little action figures, story pictures may be drawn, similar to the Indian boy shooting at the mark with his bow and arrow. With a very little change he may be made to shoot at a tree-trunk, a deer or a bird.

Draw a boy flying a kite; rowing a boat; pad-

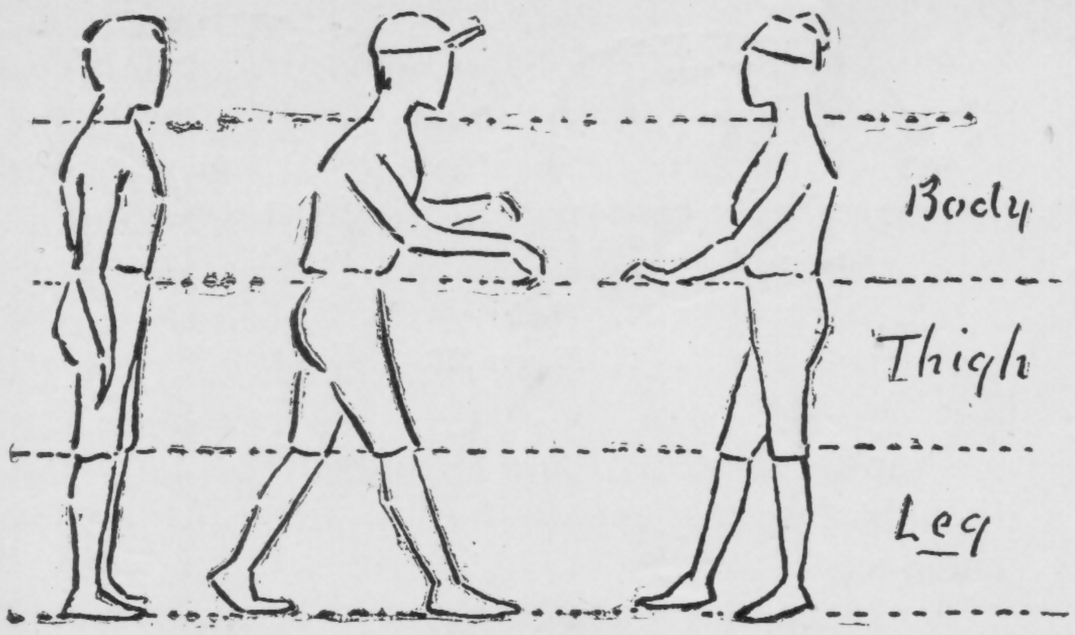


Figure 22

dling a canoe; pushing a wheelbarrow; pulling a cart; climbing a ledge of rock; sitting on a log, fishing. These and many others can be made when once confidence is established in the ability to get results.

THE HUMAN FIGURE

Boys and girls are the most interesting objects to which action can be applied. Perhaps the most simple way of drawing the human figure is to make the body, thigh and leg of equal length.

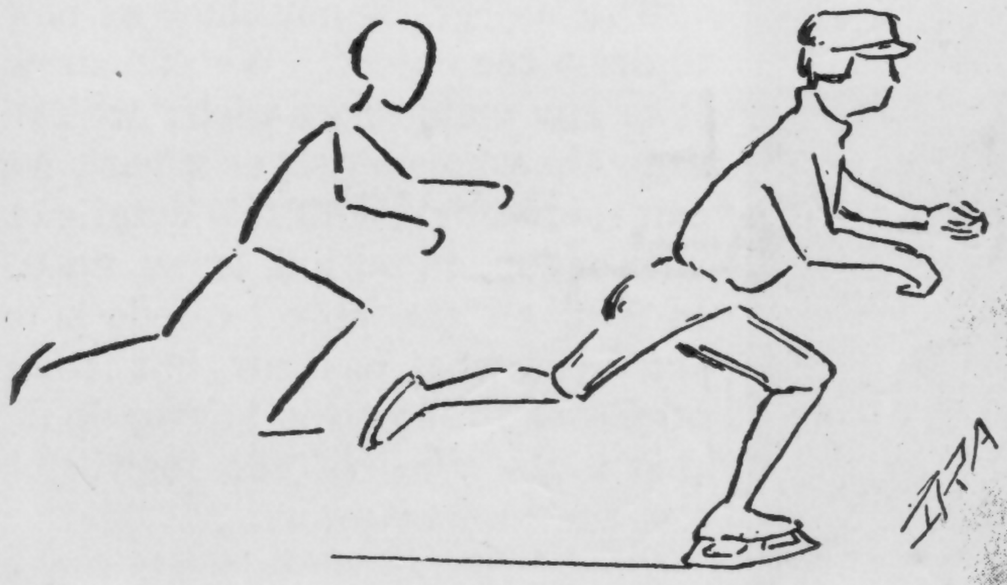


Figure 23

Draw four light horizontal lines at equal distances apart, as in Figure 22. These equal spaces will divide the human figure into three equal divisions, body, thigh and leg.

The body, in these divisions, extends from the neck to the belt, the thigh from the belt to the knee, and the leg from the knee to the bottom of the foot. These are natural divisions, and are discernible on boys and girls at a glance. These three equal divisions become the general guide in the placing of these parts.

Preference in length may be given to the thigh.

The head and neck are put in place with the aid of the judgment alone. Observe and learn: that the foot is about one-half the length of the leg; that the whole arm, including the hand, reaches to about the middle of the thigh, and the elbow about to the belt.

Draw the figure in the following order: First the body, next the thigh, then the legs and arms, and lastly, the head.

Applying Action. To get the action right is one of the most difficult parts of drawing the human figure. The best way to overcome this is to represent the action by a separate figure, as shown in Figure 23. Here the action of skating is first drawn, using single lines to represent the parts, and then the full-proportioned figure is drawn with the same action. The action figure may be drawn smaller and on a separate piece of paper.

Any of the drawings in Figures 17 and 20 may be made into full-proportioned drawings.

Representing Action. Here are four figures illustrating the drawing of the human figure, showing in the most simple manner how the work is done. The figures represent running, kicking a foot-ball, catching and sparring.

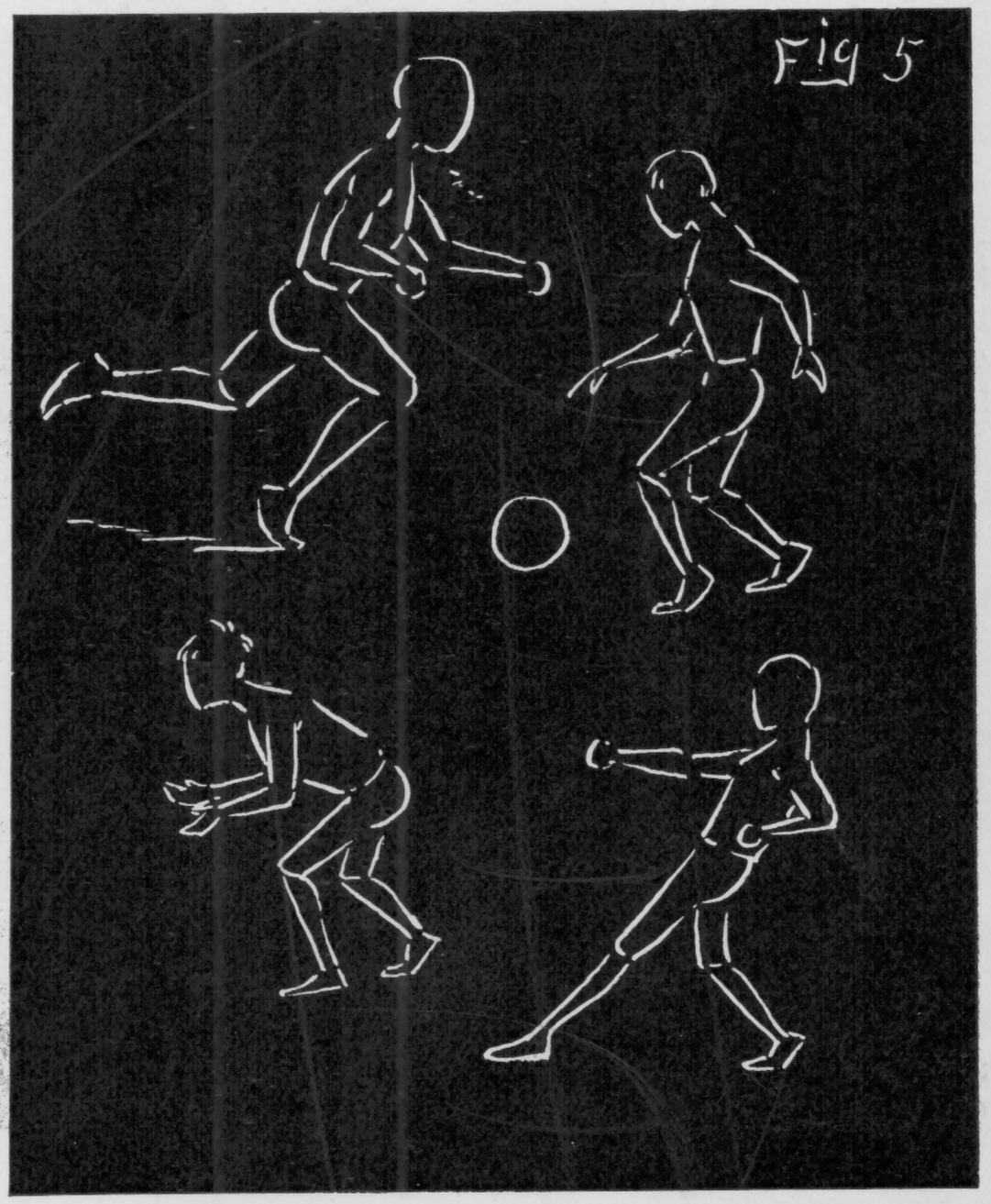


Figure 24

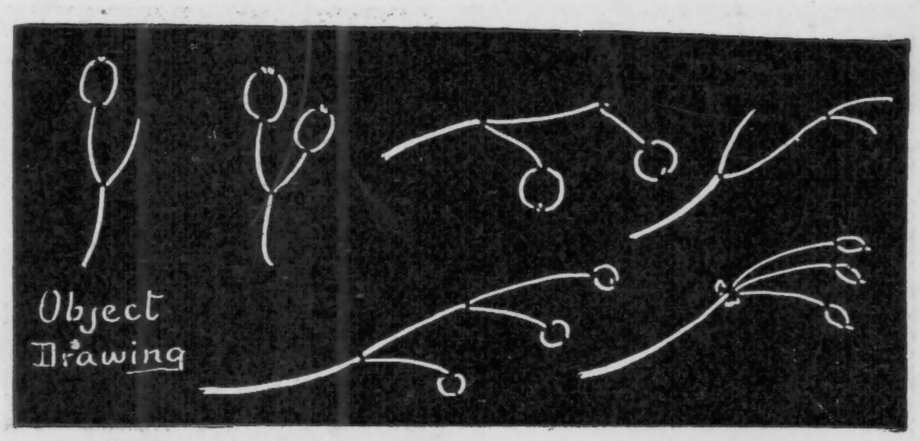


Figure 25

First learn how to draw the figure, how to get the proportions, and how to put each part in place. After some power is gained, such actions as the following may be represented:

A boy running; dancing; skating; catching a ball; rowing; fishing; pushing; pulling; climbing a tree or ladder.

Object Drawing

Object drawing is drawing directly from the object as a model. In doing this the first lesson one must learn is that he cannot represent all that the eye sees. Perhaps the best way is to begin with small twigs, dried grasses, and objects similar to those in Figure 25. Observe that the stems are represented by a single line and the joints by a space. The object may be held in the hand, as shown in Figure 27, for either blackboard or paper.

This kind of drawing is very rapid, and like most rapid work is interesting.

The Graded Line. The graded line is one that varies from light to heavy and from heavy to light. The graded line is a very pleasing line and it is well to learn how to use it. In the drawing there are various objects drawn with the graded line. So rapid is this line that one skilled in its use could draw direct from the object every drawing in Figure 26, in a very few minutes.

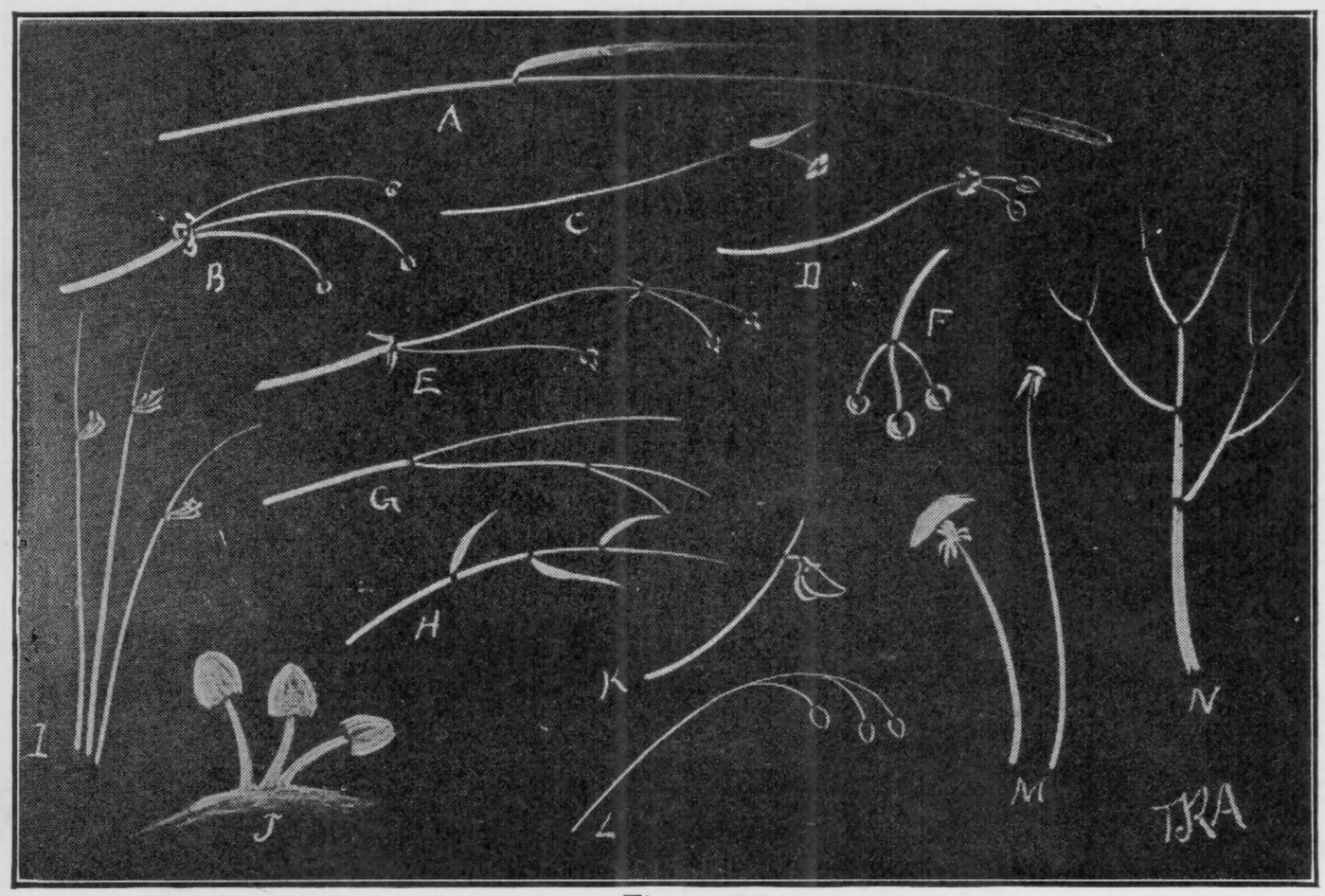


Figure 26

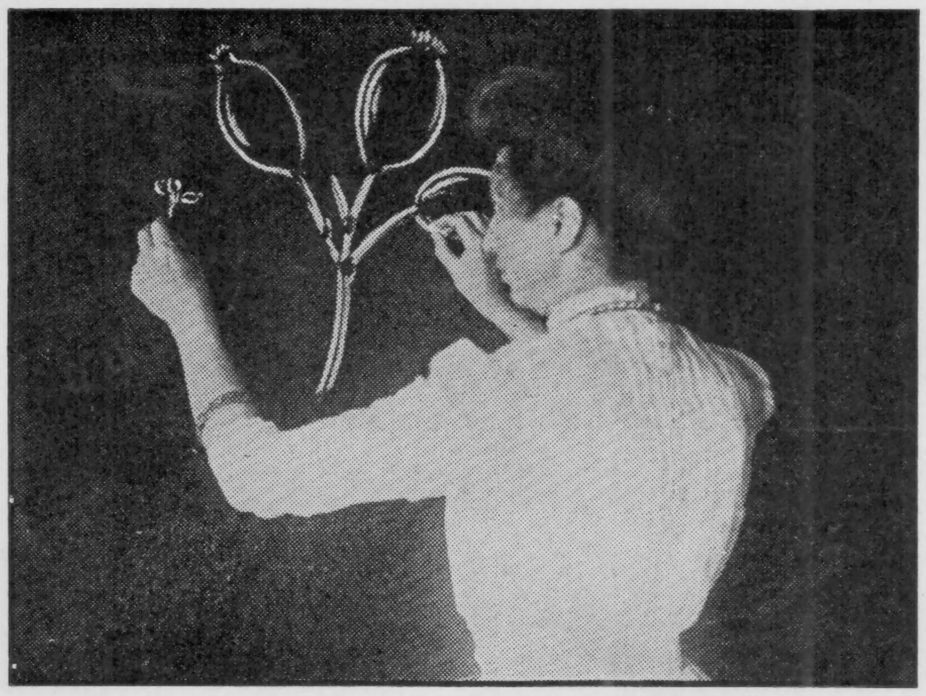


Figure 27

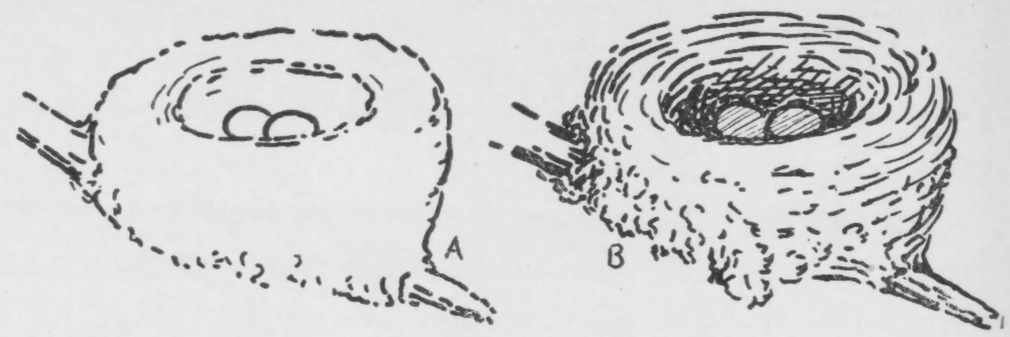


Figure 28

Practice drawing these stems, buds and grasses, then procure real ones and draw them in the same manner.

If you cannot make the graded line, practice it on the blackboard until you can draw it. Stems G and M are especially good exercises for the purpose of learning the line.

Imitation. We cannot draw all that we see, nor represent the object exactly as it appears to the eye. Imitate as closely as we will, our efforts are merely relative as compared with nature. Place a bird's nest before you. You cannot imitate it exactly as it appears to the eye, but you can translate it with few lines, as in A, Figure 28, or many lines, as in B; but not as completely as the real nest.

The object cannot show us how to draw the object. We can draw it in any manner we wish; we can draw the whole object or a part, we can represent it with few details or with many, in outline or in mass. In fact, all the object can do is to show you what to draw, but it has no power to show you how to do it; that is the office of the instructor and the copy or drawing.

Birds' Nests. Birds' nests make fine models for drawing. They are not only good models but are very interesting. In Figure 29 are some humming-birds' nests. Observe how they are mounted. A is attached to a tough leaf, and B, C and D are fastened to a limb. In the fall of the year, after the bird is through with the nest, the limb can be cut off and used as a handle to hold the

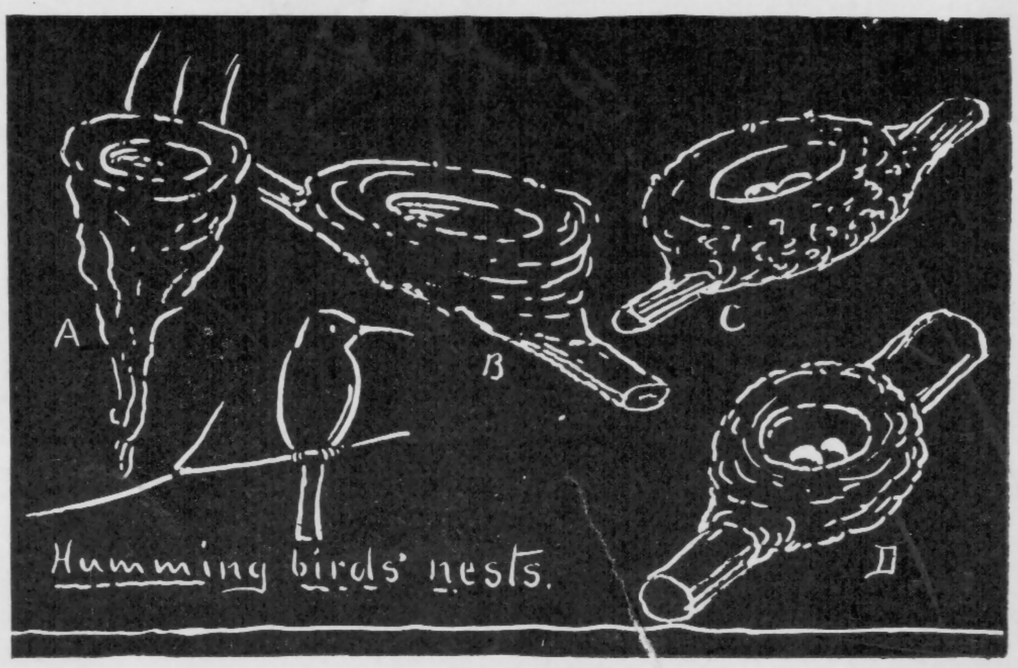


Figure 29

Colored Plate VI-a

Colored Plate VI

nest when it is being drawn. A collection of birds' nests makes a fine set of models for drawing.

Preparing Objects. Most natural objects need to be made more simple before they can be used for drawing. This is done by reducing the number of parts, removing those that come toward you and those that recede, and also avoiding lines that cross. Of course after some power has been gained and these difficulties can be overcome, the object need not be made so simple. At first, reduce the object to not more than three parts. One naturally thinks he must draw the whole object, but it is well to learn early that this

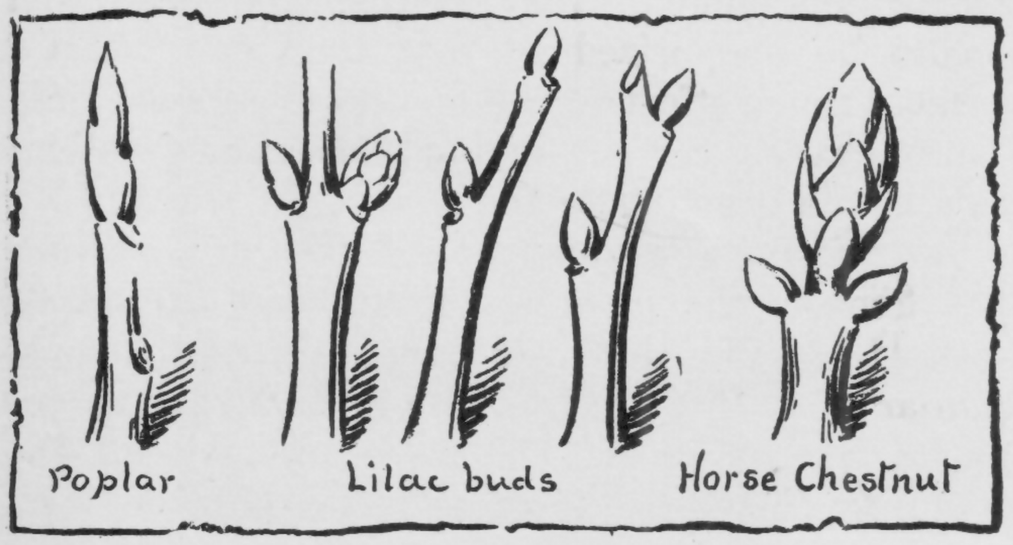


Figure 30

is not necessary. We can draw the blade of a jack-knife without drawing the whole knife, we can show how the end of our pencil is sharpened, or how the pen fits into the penholder without drawing the whole pencil or pen. We can also make the drawing as large or as small as we wish. In general, a blackboard drawing should show plainly across the room, and a pencil drawing should be of such a size that the movements are not cramped and the strokes of the pencil can have considerable freedom.

Buds such as those in Figure 30 make very good models. Observe that they are drawn in

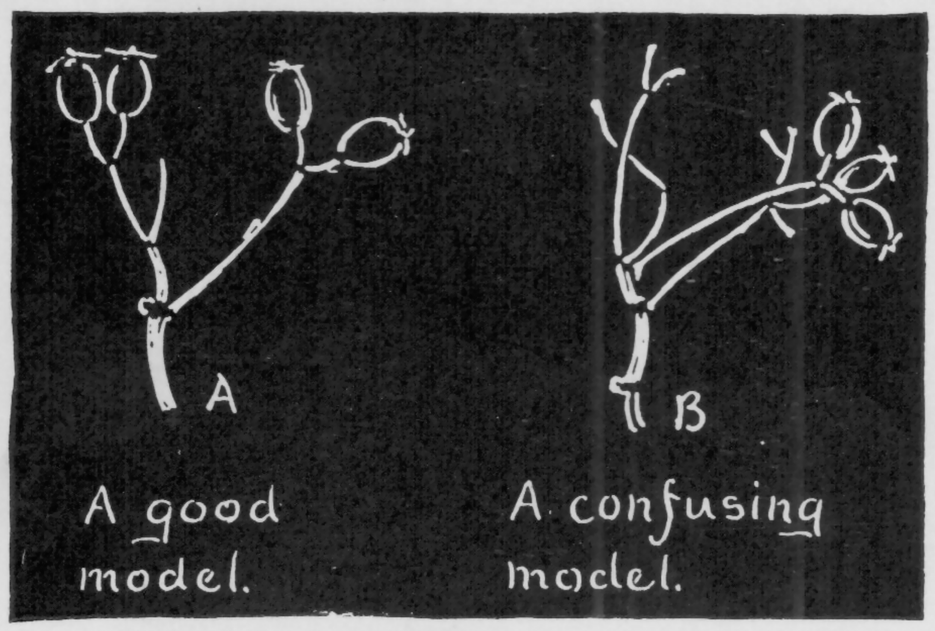


Figure 31

such a manner that none of them are foreshortened.

How to Avoid Confusion. Confusion is the mischief-maker in object drawing, and must be avoided. Confusion is caused by the crossing of lines, by lines close together, and by too many parts.

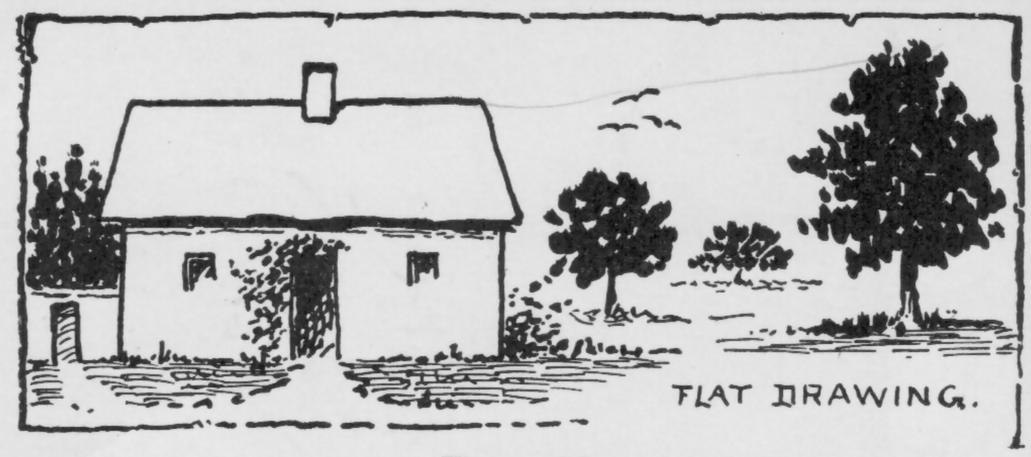


Figure 32

Confusion may be avoided by holding the model in such a manner as to avoid the crossing of lines. If the lines are close together spread them apart, or cut away those that seem to obstruct; if there are too many parts remove those that are in the way, or those that are foreshortened. In other words, prepare your model in such a manner as to remove all that is confusing to you.

The Easiest Way. The easiest way to represent objects is to draw them as they would appear when directly in front of the eye. It is a mistake to think we must represent all that the eye sees; we can represent the minimum as well as the maximum. To stand directly in front of the house and draw it as in Figure 32 will as often make as pleasing a picture as to represent the sides and thus increase the difficulties. When only one face of an object is represented, it is called flat drawing.

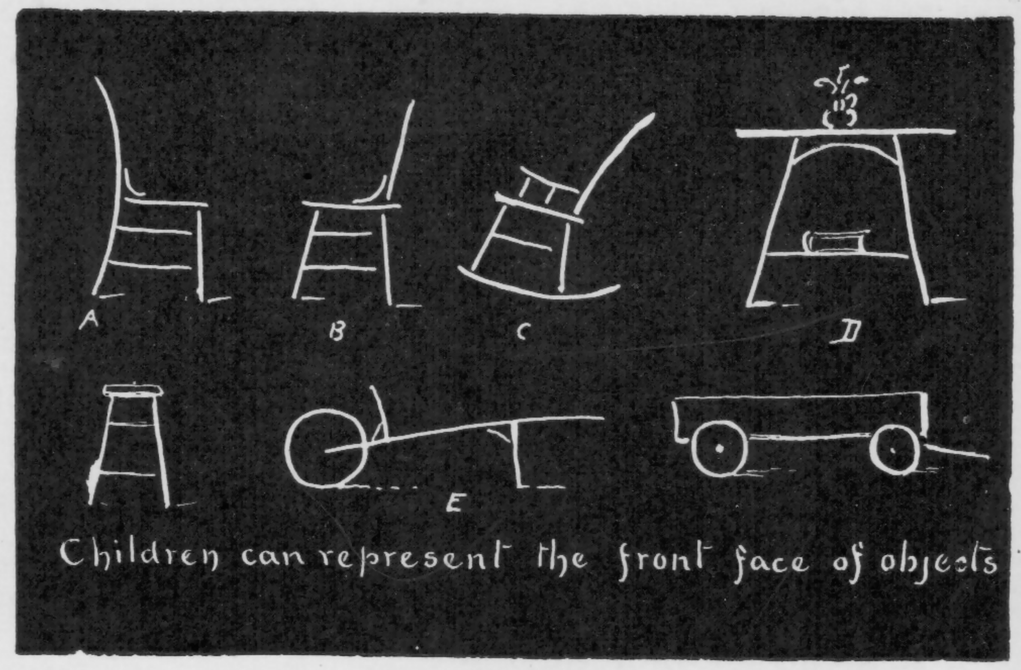


Figure 33

The house represents flat drawing, and the trees at the right suggest perspective after the manner shown in Figure 11. Nearly all objects may be represented in flat drawing.

FLAT DRAWING

One can draw the front face of a chair, a table, a wheelbarrow, a cart, or any other object, if he so desires, without drawing the farther faces or details. In Figure 33 only the front part has been represented, and the work has been made still more simple by representing each part with only one strong, heavy line. Using one line and drawing only the front face brings object drawing within the range of both young and old, and makes the drawing very rapid as well as success-

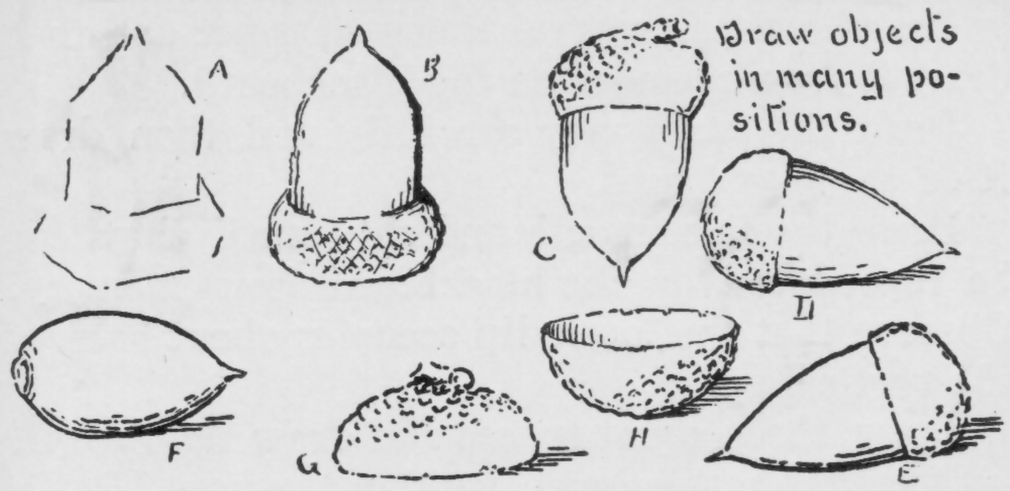


Figure 34

ful. If we try to represent all we see, the chance of failure is much greater. By using this method, the difficulties may be overcome more gradually and discouragement avoided.

How to Study Objects. Much more will be gained by choosing one good object and drawing it many times in different positions than to choose a new object for every drawing. Quality is more than quantity, and success is the key to interest. One loves to do that which he can do with some meas-

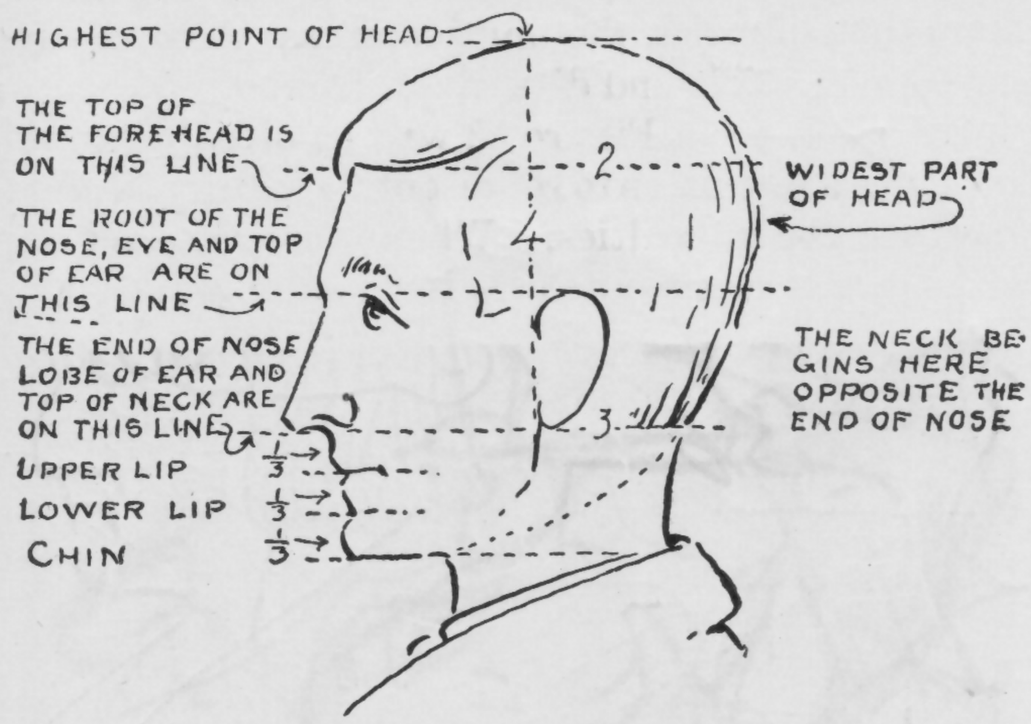


Figure 35

ure of success, rather than to take up new lines of work. We learn how to catch a ball by catching it over and over, and we can learn how to draw in the same manner.

For example, choose an object like an acorn. First, sketch it with light lines as in A, Figure 34, and finish the drawing as in B; then draw it as in D and E. Remove the cap and draw the acorn as in F, and then the cap as in G and H.

THE HUMAN HEAD

Perhaps there is more desire on the part of boys and girls to draw the human head than any other object. It is, without doubt, the most interesting object in the world.

The first step in drawing the human head is to learn the position of each part. In the drawing, the position of each part is marked and the method of putting the part in place is given in the plainest way possible.

The general shape of the head is oval, with the small end marking the chin. This oval is divided into quarters by the three dotted lines 1, 2 and 3, and the lower quarter into thirds. Study these lines closely and find out what each one marks.

The middle line, 1, marks the root of the nose, the upper eyelid and the top of the ear.

Line 2 marks the top of the forehead or the beginning of the hair.

Line 3 marks the end of the nose, the lobe of the ear and the top of the neck.

The vertical line, 4, through the middle of the head, marks the front of the ear.

The lower quarter, divided into thirds, marks the upper lip, the lower lip and the chin. These proportions make a fairly well shaped head, and should be memorized so that they can be used without much effort. The measurements are only approximately correct, but will be found excellent aids in the drawing of the head.

Learning the Position of Each Part of the Head. The general shape of the human head is oval, as shown in A, Figure 36. Cut from cardboard an oval similar to A, three inches long and two and three-fourths inches wide. For the blackboard cut the oval from pasteboard fourteen inches long and thirteen inches wide. Of course, you may draw this oval offhand, as you will do later, but at first better results will be attained by using the pattern.

Place the pattern on the paper or blackboard and mark around it as in A. Draw the light horizontal line, 1, and the vertical line 4, through the middle of the head. This line marks the root of the nose, the upper eyelid and top of the ear as shown in B.

Line 2, half way between line 1 and the top of the head, marks the top of the forehead or the parting of the hair.

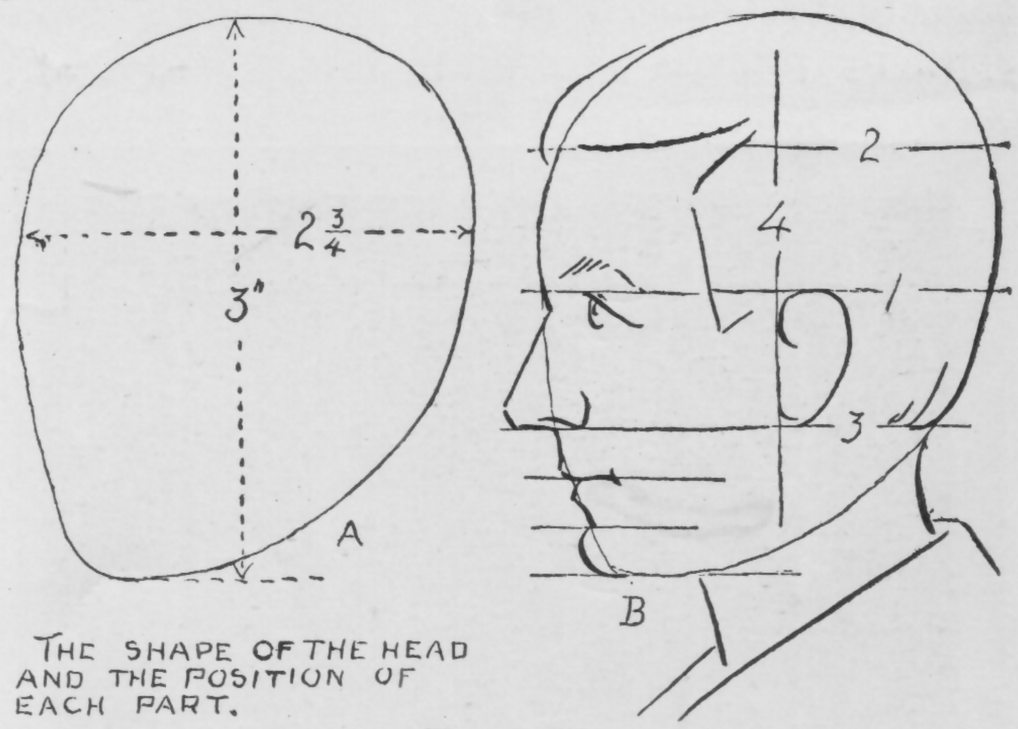


Figure 36

Line 3, half way between line 1 and the lower part of the chin, marks the end of the nose, the lobe of the ear and the top of the neck.

Divide the lower quarter into thirds, and the upper lip will be in the first third, the lower lip in the second third and the chin in the last third. This will complete the position of each part in a fairly well shaped head.

Work out the following exercises:

Draw the oval A and place the ear.

Draw the oval A and place the nose and eye.

Draw the oval A and place the ear and hair.

Draw the oval A and place the nose, eye, ear and neck.

Draw the oval A and place the nose, lips, mouth and chin.

Draw the oval A and place each part of the head.

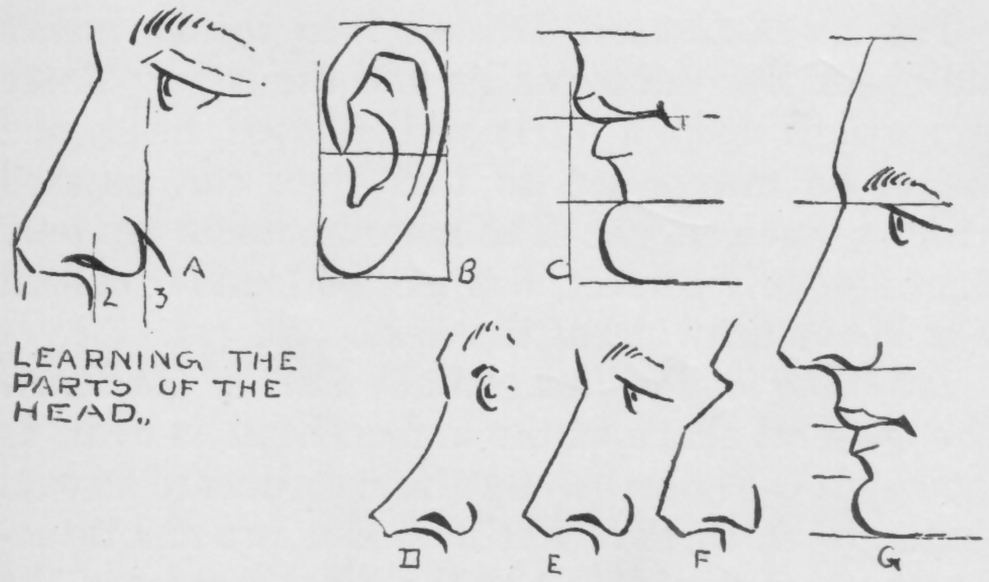


Figure 37

Learning to Draw Each Part of the Head. The next step is to learn how to draw the parts of the head: the nose, eye, ear, lips, mouth and chin.

Observe in A, Figure 37, that the distance from the end of the nose to the lip is a little longer than the distance from the lip to the wing of the nose. That is, 1-2 is slightly longer than 2-3. Study this closely.

Observe in B that the ear is about twice as long as wide, and that it is contained in two squares.

Observe in C that the upper lip, lower lip and chin are about equal in vertical space, and that the upper lip projects beyond the lower lip and chin.

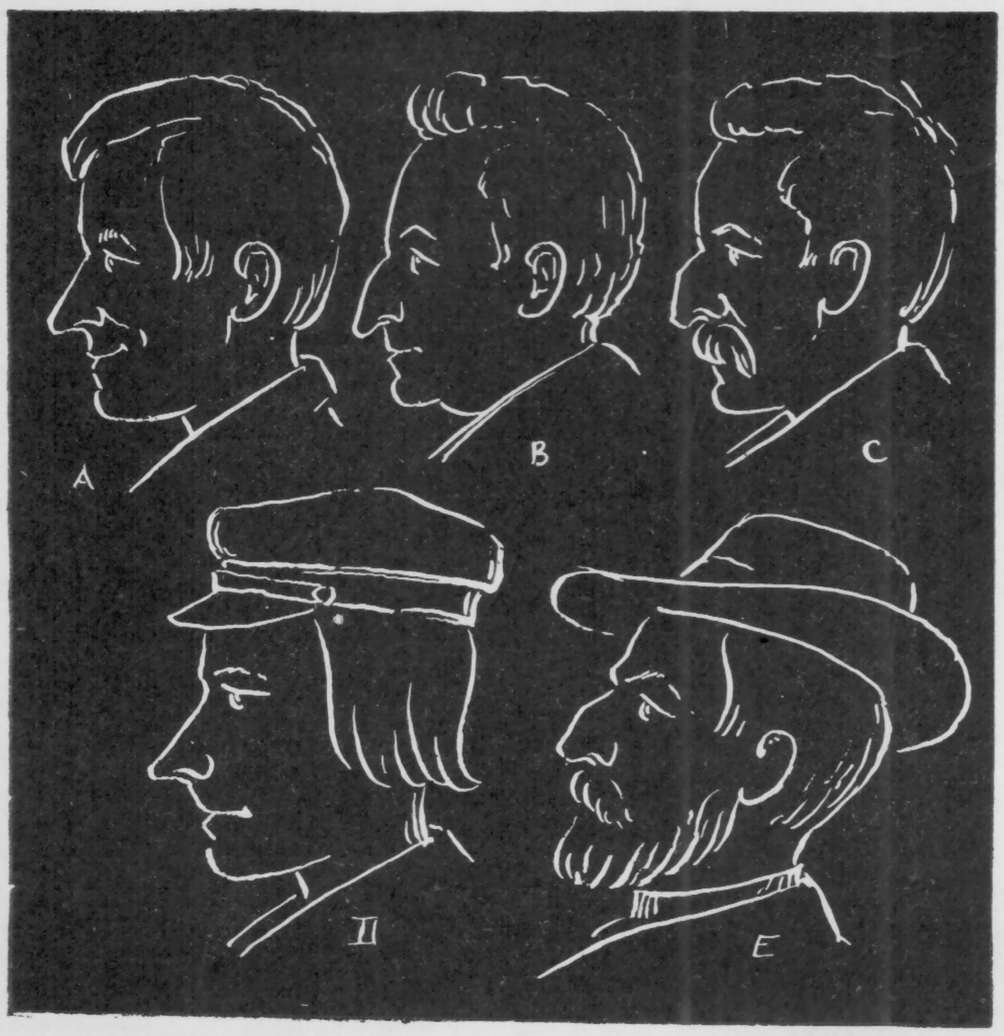


Figure 38

Draw nose A several times on paper and then draw it from memory on the blackboard.

Draw the ear B very carefully and then draw it on the blackboard.

Draw the lips, mouth and chin until they can be reproduced on the blackboard from memory. Observe that the lower lip occupies about half of the vertical space.

Draw three equal spaces and draw the face G.

Draw the whole head, making the nose like D.

Draw the whole head, making the nose like E.

Draw the whole head, making the nose like F.

Of all the millions of heads in the world, there are no two alike. The eye, nose, mouth, chin and ear differ in each one, as do the expression and proportion. But if the plan has been followed thus far, and if the head of standard proportions has been learned, as well as the position of each part, then the pattern or outline may be dropped and the head drawn without its aid.

In Figure 38 there is a variety of heads. Copy them, with the idea of learning the head more than of making a picture. Draw A carefully

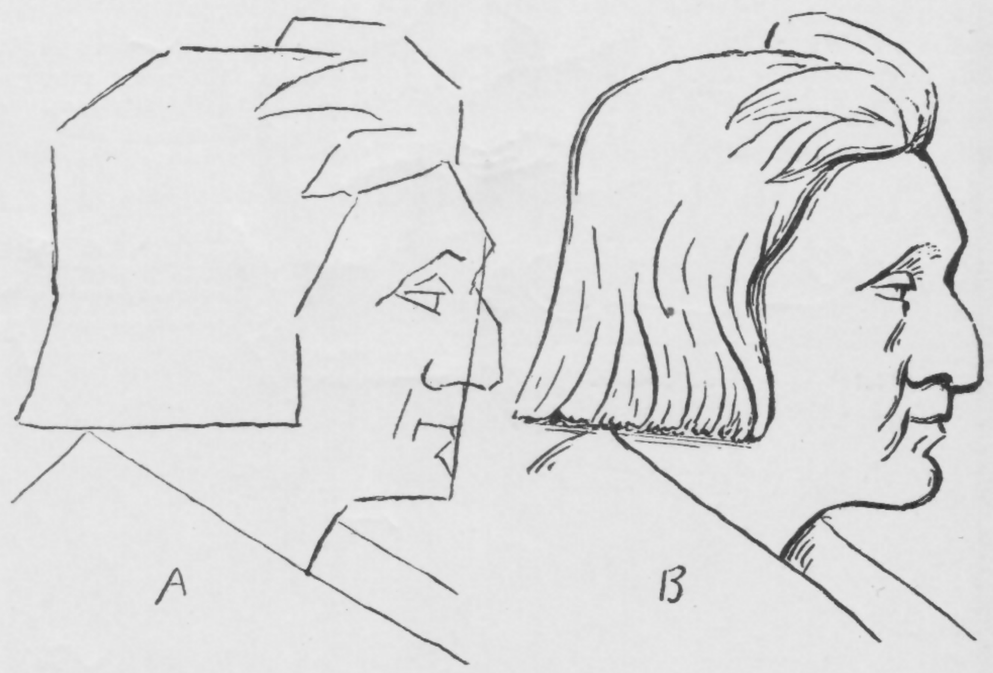


Figure 39

on paper and then try to draw it on the blackboard from memory. At first this is a little difficult, but after the parts have been memorized it becomes increasingly easy. When once the habit is formed of giving expression to our thoughts through drawing, it will be found that our powers of memory are as great in this line as in any other. In fact, it should be easier to memorize a form than a verse in prose or a process in number, because the form is more tangible. Memory drawing has almost infinite possibilities.

Drawing from the Real Head. After the head has been learned, and the positions and directions established, one may draw from the real head, or the pose as it is called. For this purpose choose a face with strong features and with marked characteristics. Mark the proportions with light lines, as shown in A, Figure 39, and then finish with heavier lines, as shown in B.

It always requires some practice to go from the copy to the real object. This is because there is

Colored Plate VII

Colored Plate VIII

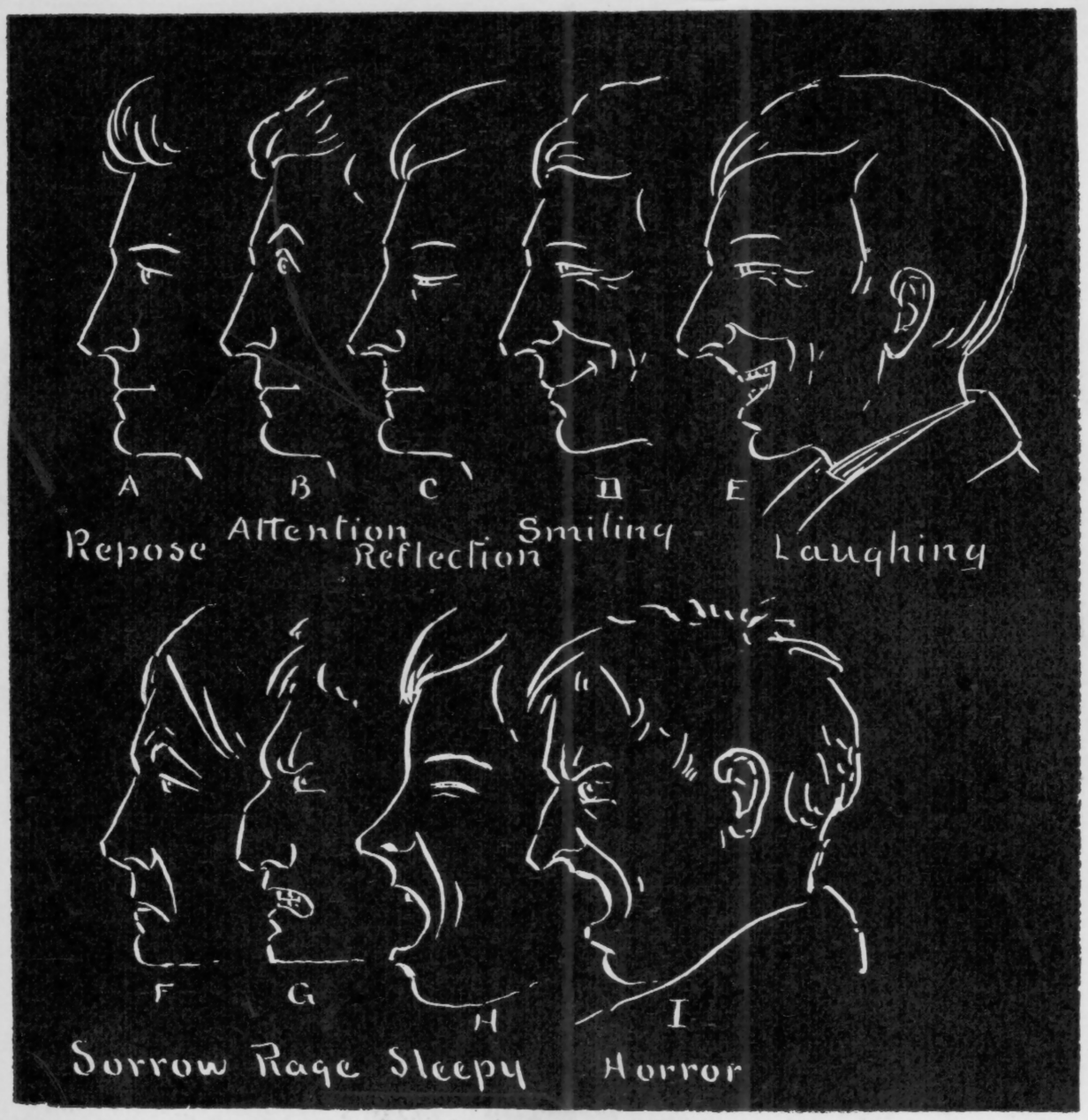


Figure 40

nothing in the real object to show you the mechanical means of making the drawing. Practice will soon overcome this difficulty, and you will learn to apply the method you have already learned with the copy.

Choose older people for models at first, as they are more patient, and usually have stronger and more characteristic faces than younger persons.

EXPRESSION

Expression depends on direction. That is, it is the direction of the lines that gives expression. For example, in repose the lines are horizontal. The horizontal line is the line of repose. In the expression repose, observe that the mouth and eye are horizontal. In attention or interest the eye is open, and in reflection it is partly closed.

In smiling and laughter the lines of the face expand and curve outward and upward and the eye partly closes.

There are only four basic expressions: repose, pleasure, sorrow and passion.

In repose the lines in general are horizontal, as in A, Figure 40. B and C are like A except the eye.

In pleasure the lines expand and the curves predominate, as shown in D and E.

In sorrow the lines are drawn down and the eye-brow is drawn upward at the inner angle, as in F.

Passion has a wide range. Discontent, envy, revenge, hatred, anger, jealousy,—there is a long line of characteristics, all of which are pictured by the angular lines. Human expression has wonderful variety, but practically all expressions are made by combining the four basic expressions, very much in the same manner as in A, B and C.

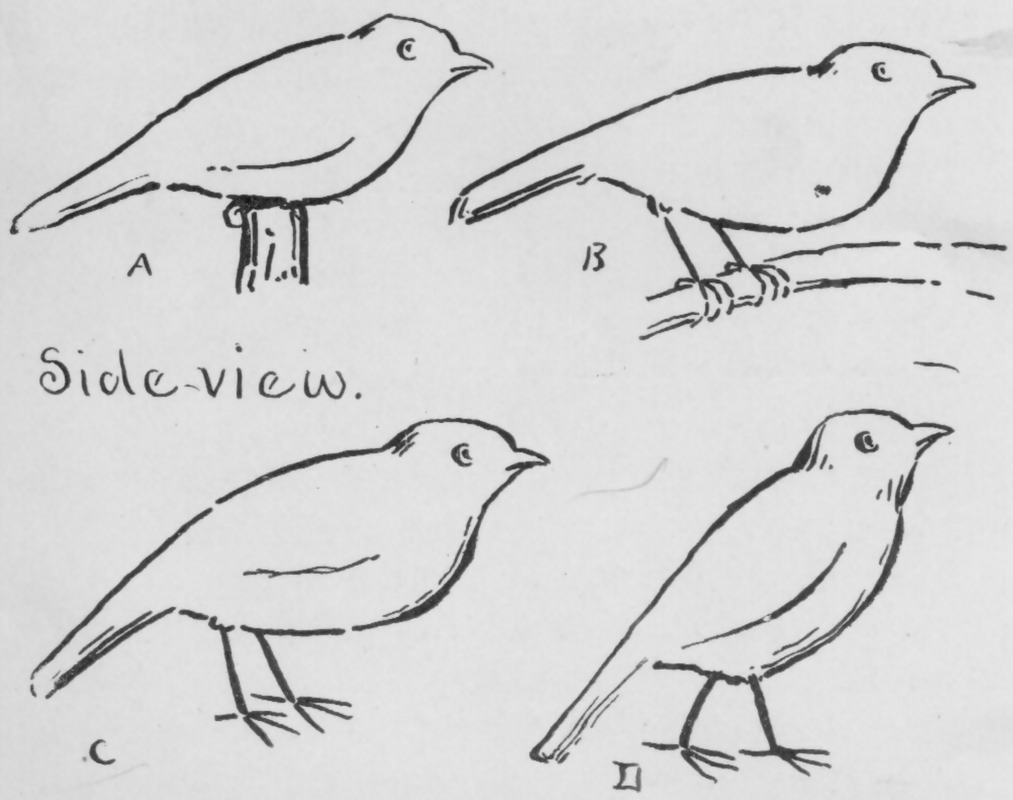


Figure 41

DRAWING BIRDS

In picture making birds are useful in adding life and interest to the drawings.

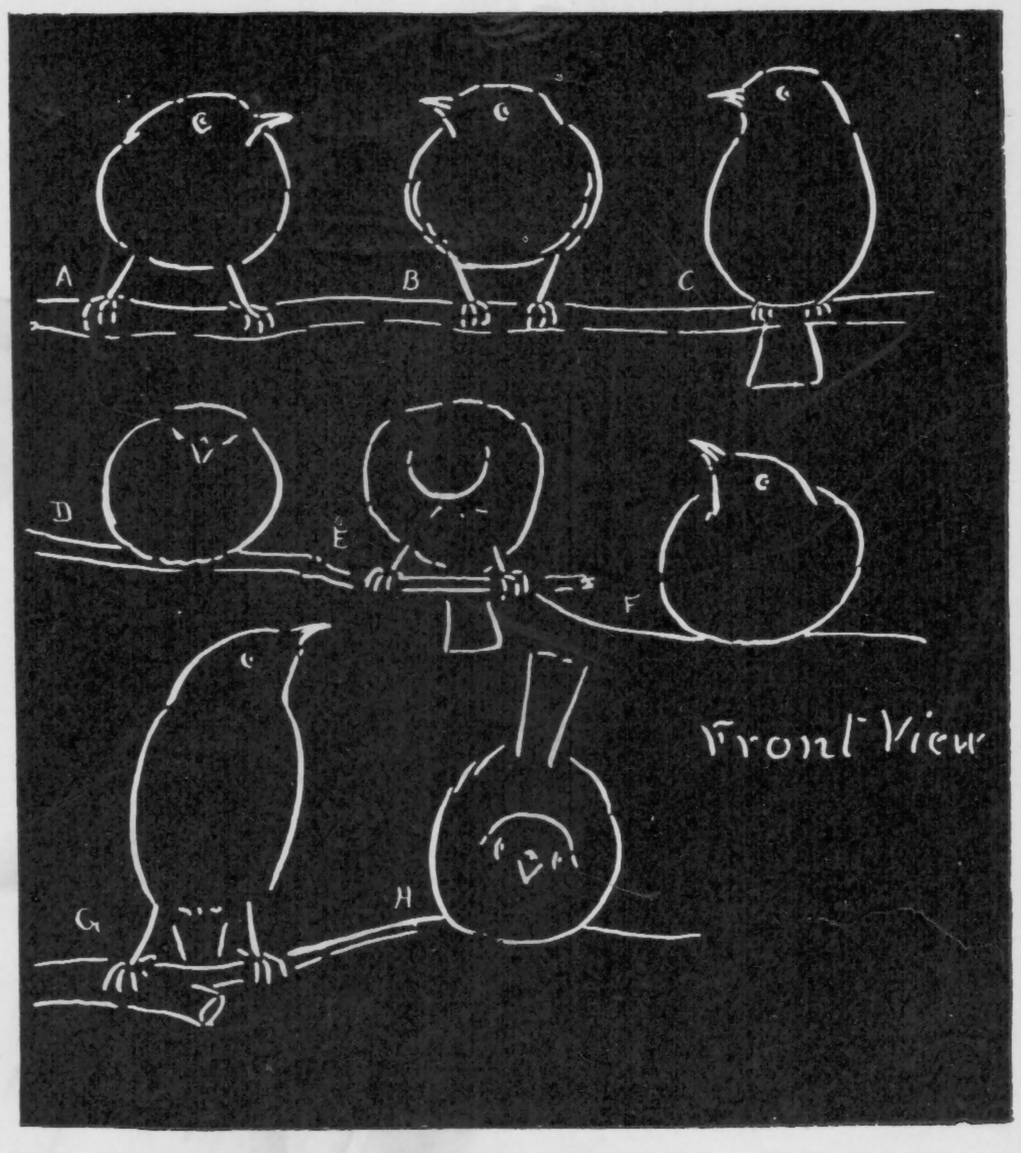


Figure 42

A general plan for the drawing of birds is as follows:

First, learn from the drawing the general form of the bird, the position of each part, the bill, the head, the tail, the legs and feet, the directions and proportions of each part.

Second, use this knowledge as an aid in drawing mounted specimens.

Third, study the real bird.

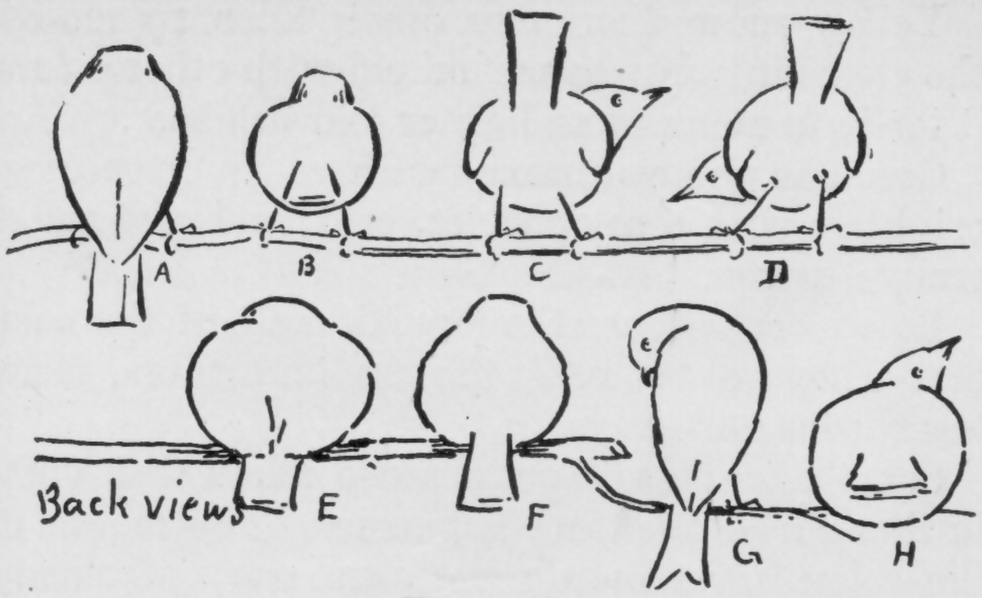


Figure 43

In Figure 41 there are four simple drawings of the bird as viewed sideways. They are intended to show the proportions of the bird and the position of each part. Observe that the general shape of the body is oval and that to this shape are added the head, tail and legs.

Your first work is to learn the proportions and the position of each part, and this is done by means of the copy.

Draw bird A sitting on the post. Draw it several times. Draw first the body, which is the largest part, and to this add the head, tail and legs. Do not begin with a small part such as the bill; it is easier to add small parts to large than to add large parts to small.

Draw bird B standing on a perch. Draw it carefully on paper and then from memory on the blackboard. Do not work for the picture so much as for the proportions and shape. Bird C is standing on the ground and bird D is walking.

The Front View. For convenience in learning, the study of the bird is divided into side view,

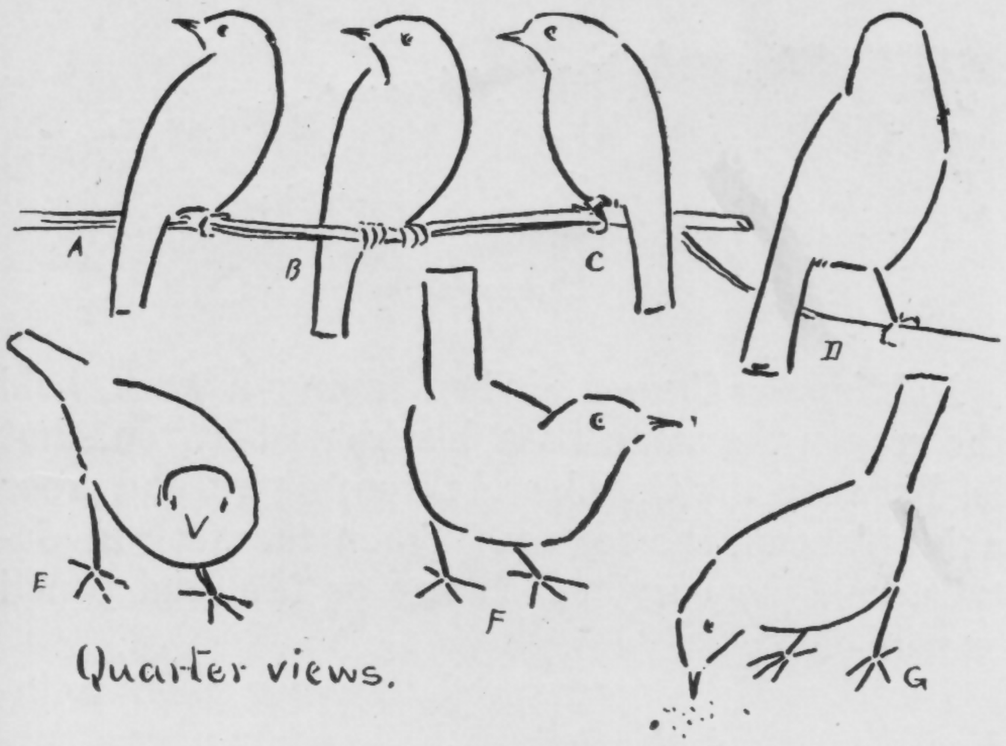


Figure 44

front view, back view and the quarter views. This division introduces an orderly arrangement that is a great aid in overcoming the difficulties of learning the bird elements. The principle of construction is the same for all birds; the difference is mostly in the proportion of the minor parts and details. All birds have bills; some are long, some short, some straight and some hooked, but all are of the same general principle, so much so that to learn one is a great aid in drawing all.

Observe in Figure 42 that the body of the birds in the front view is round, and that the circle may be used as a means of giving shape to the body. Draw the circle with light lines and to it add the head, tail and legs. Birds C and G are more oval than round.

The Back View. The outlines in Figure 43 are much more simple and easy to represent than the real bird. These contain only the essential features; all the little markings, the feathers and smaller details are omitted, and there is nothing left to confuse the eye, or to stand in the way of seeing the bird as a unit.

With the exception of A and G the bodies of the birds are round, as in the front view. Make a drawing on paper and then hold it off at arm's length to see if the proportions are correct.

When the drawing is on the blackboard, stand away eight or ten feet to see that each part is of the right size and every part as it should be.

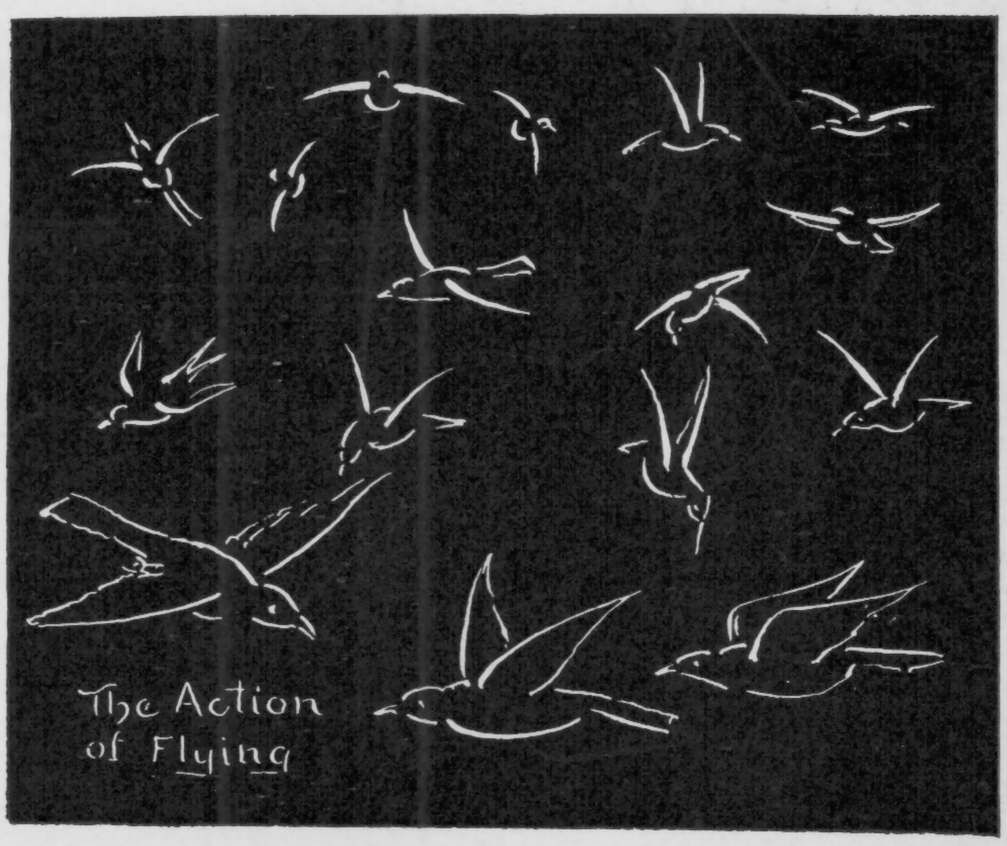


Figure 45

It is an excellent exercise to draw one of these birds back view and then draw the same shape and make it face forward. The same shape will do for both drawings. For example draw two forms similar to E and make one face forward and the other back.

Draw A with the head showing side view.
Draw B with the bird looking up.
Draw C with the head on the left side.
Draw D with the bird looking to the left.
Draw H facing this way.
Draw F with the head turned so that it is looking this way.
Draw G looking to the right.

Quarter Views. The quarter views are the most numerous and in general are the most pleasing. Figure 44 represents a few of the most common.

Give special attention to placing the feet under the bird. A bird cannot stand up, any more than

a human being, if the feet are not under the middle of the body. The bird must be balanced on the feet, and this is done with the aid of the judgment alone. Study the drawing, study the proportions of the body, head, tail, and feet, study how the feet are placed under the body to give perfect balance. Study the possible movements of each part. The head can turn the full round of the circle and be placed to any part of the body. Also each part has definite movements that it is well to observe.

It is better to begin with these simple drawings than with a live bird. It is doubtful whether a beginner could make much headway learning to draw from such a restless bit of animation as the common bird, with its multiplicity of markings and endless details. It is much better to approach the task with such preparation as may be derived from these simple directions.

The Action of Flying. The lower middle bird in Figure 45 represents the typical action of flying. Learn this action and it will be found the key to all the others.

Action is a great aid in the drawing of the bird, after the general plan has been learned. It is more stimulating to represent the bird as doing something than merely to draw the bird. The action is a strong propelling force. The following are some of the most common actions, and each one may be drawn side view, front view, back view or quarter view.

Draw the bird standing; sitting; walking; running.

Draw a bird looking up; looking down; looking to the right; to the left.

Draw a bird eating; drinking; bathing.

Draw a bird singing; scolding; sleeping.

Draw a bird building its nest.

Draw a bird sitting on its nest.

Draw a bird preening its feathers.

Draw a bird "sharpening its bill."

Painting with Colored Crayons

THE Standard Colors are pure colors, which, by common consent, are accepted as such. They are red, orange, yellow, green, blue and violet. Of these colors, red, yellow and blue are called Primary Colors, and orange, green and violet are called Secondary Colors.

The Color Box, which forms the basis of these drawings in colored crayons, is an eight-color box containing the standard colors, red, orange, yellow, green, blue and violet, and in addition brown and black. This forms a color box that, with perfect colors, would be complete. It is also the easiest to teach and most practical to handle and use.

The Colors. The following facts about the colors will be found helpful.

Colors tending toward red or orange are said to be warm, and those tending toward blue or violet, cold.

Yellow more than any other color represents the element light; hence, mixed with other colors, it tends to make them lighter and brighter.

Green is neutral; mixed with yellow it becomes brighter; with blue or violet, cold; and with red or orange, warm.

Brown or black are the "modifiers" of the color box. They are to modify the standard colors, forming shades and grays.

Complementary Colors are two colors that unite in themselves the three primaries. Hence, one of the colors must be a primary and one a secondary to form complementary colors. The following are the complementary colors:

Red and green.
Yellow and violet.
Blue and orange.

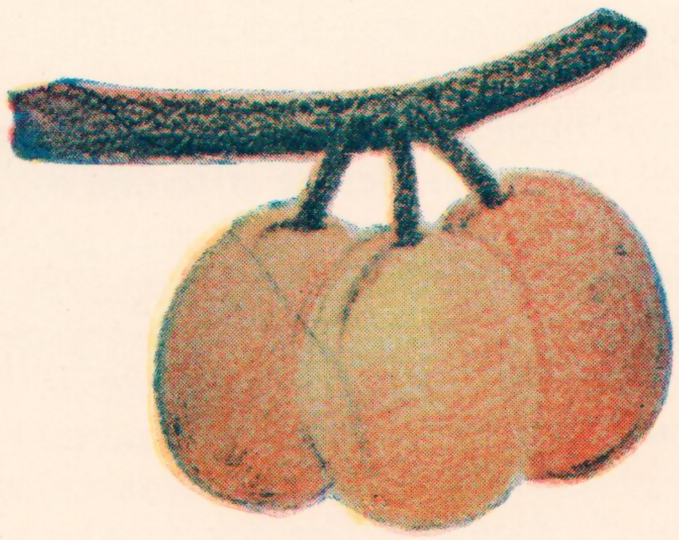
It is possible with two complementary colors to make complete pictures.

The Paper. Use common white drawing paper of rather fine texture. A tablet is preferable, but if single sheets are used they should be placed in an open book to insure a smooth foundation. A tablet four and one-half by six inches is an excellent size for practice work. A tablet six by nine inches is the next size. The work in this course is planned for a pad, or tablet, four and one half by six inches.

Figure 46

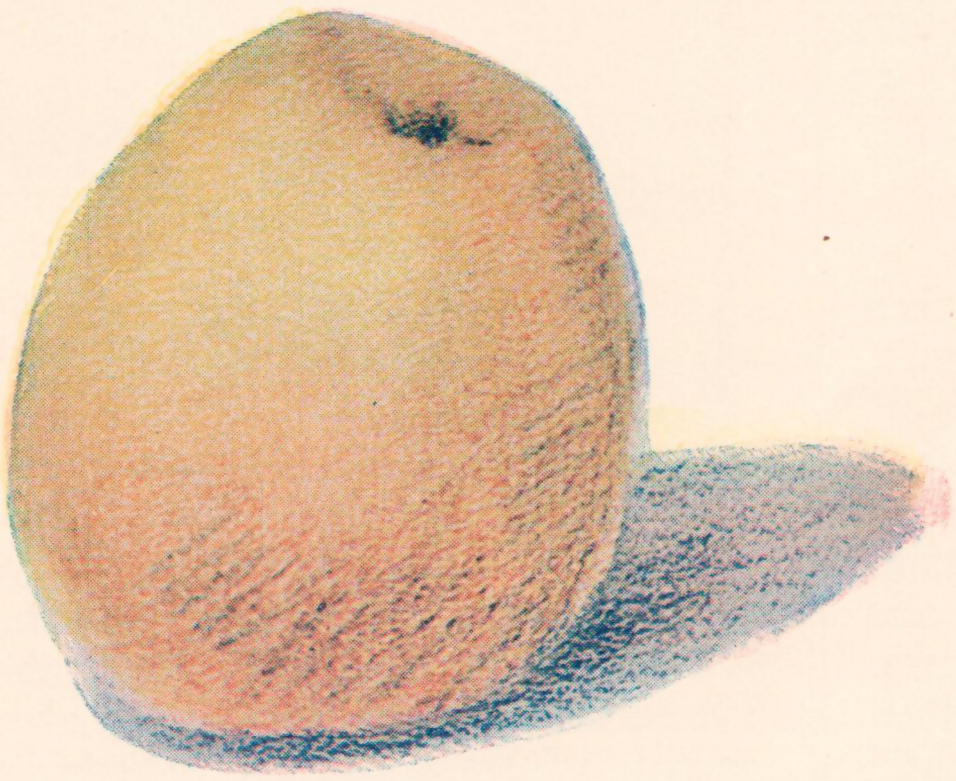
Holding the Crayon. When laying a wash, hold the crayon the same as a blackboard crayon, that is, between the thumb and three fingers, and wear a flat place on the crayon. When marking in details, hold the crayon the same as the lead pencil or penholder.

The Wash is a term used in water colors to indicate color spread more or less evenly over a surface. The same term is used in colored crayons to indicate the color spread over a surface. The wash is the most important mechanical element in crayon drawing. The first aim is to acquire the ability to lay a smooth, even wash, free from scratches and irregularities. Little progress in crayon drawing can be made until this ability is acquired. The first lesson is for the purpose of acquiring this ability.



Colored Plate IX

Colored Plate X



Colored Plate XI

The amount to use must rest with the judgment. The picture, the colors to use, and the order of their use is given, but the strength of the washes and their manipulation must and should be left to the draughtsman.

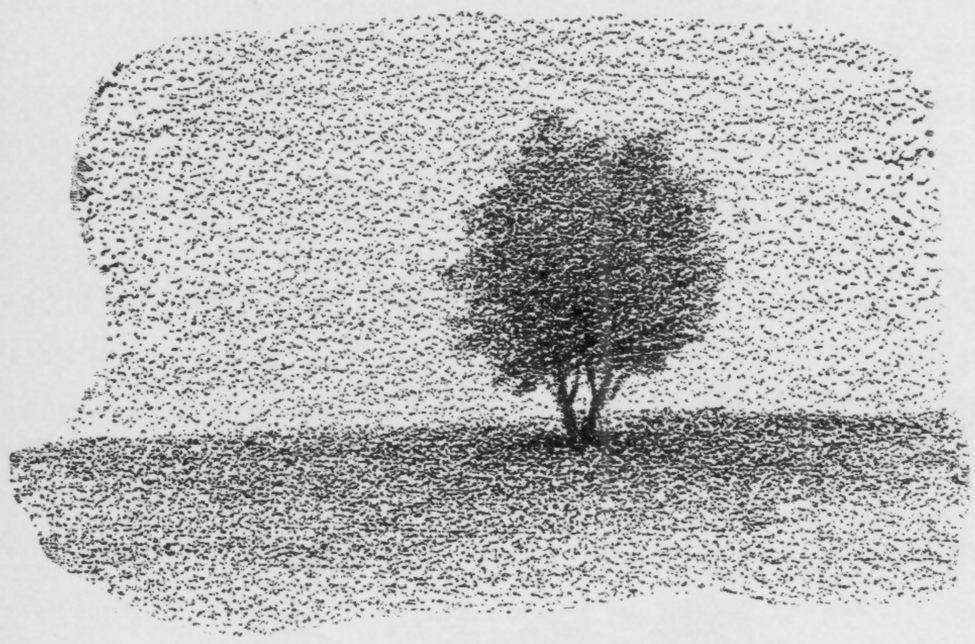


Figure 47

Painting a Landscape. Perhaps Figure 46 is as simple as can be made for a first effort in landscape work. It is merely a tree growing out of the ground. The sky is not painted but is left the color of the paper. Paint the landscape entirely with black.

With a free stroke and with no guiding outline paint the tree. Begin at the top and work downward. Paint the trunk darker than the foliage, and see that it is placed under the middle of the top.

Paint the land with the same free stroke and make the part under the tree darker than it is farther away from the tree.

Use only one color for first efforts. Make the painting about five inches long and about three inches wide. This is as large as can be managed at first.

Colored Plates I and II, painted with red and blue. are the same subject. These are painted about the size that beginning pupils can handle to the best advantage.

Paint the picture first in black, and then in red; then follow with blue, and lastly with brown.

Figure 47 is like Figure 46 except that it contains a sky in addition to the land and tree.

First paint the sky with a light free stroke; then paint the tree top, following with the tree-trunk, and finally with the land.

Do not at first require children to paint to a margin around the drawing, as that tends to cramp the freedom of the stroke. Make the strokes long, as long as two or three inches for the sky, and shorter when representing the foliage of the trees.

Paint the drawing entirely with black; then follow with one entirely with blue. Paint still another entirely with red and perhaps another with brown.

House, Land and Tree. You can place a margin around the tablet by using the second, or long finger as a guide, or you can use a ruler and a light pencil line and then strengthen it with the crayon.

Draw the shed or house and mark in the land and tree with light pencil lines. Paint the large washes first; that is, place an even wash over the house and ground before adding any of the details. It is the broad washes that make the picture; the little details, though interesting in themselves, do not have much effect on the picture as a whole.

Paint the whole picture with one color, say with black. Then draw another and paint the shed, tree and ground with red. The sky may be left the color of the paper, or it may be painted the same as in the drawing. A good way is to place the general wash on the shed, ground and tree, striving to give to each their correct value, and then adding the details. The sky may be added last if so desired. This drawing may be painted with black, with brown, with red, with blue or with violet. Yellow, orange and green are hardly strong enough to paint an entire picture without the aid of a stronger color such as brown or black.

Painting with Two Colors. After some power has been gained with one color, two colors may be used. Figure 48 is a very good example for first efforts with two colors. We will paint it with the complementary colors yellow and violet.

With a very light pencil line mark the division between the sky and the land. Place a wash of violet over the sky and let it overlap the land somewhat, blending into it. Then place a wash of yellow over the land, letting it blend into the violet. Let the yellow wash be strong and vigorous. With the violet crayon and a vertical stroke, mark or wash in the distant wood, blending it into the yellow wash. Add the details to the foreground with the violet crayon. If the landscape looks crude

Figure 48

go over the foreground with the yellow crayon and blend the places that seem harsh.

Colored Plate V is painted with the same colors and in the same manner as given above and shows in nearly full size how the work is done.

The same picture may be painted, and in the same manner, with the complementary colors blue and orange. Paint the sky blue and the ground orange and then blend them together as shown in Figure 48. Colored Plate IV shows how a landscape may

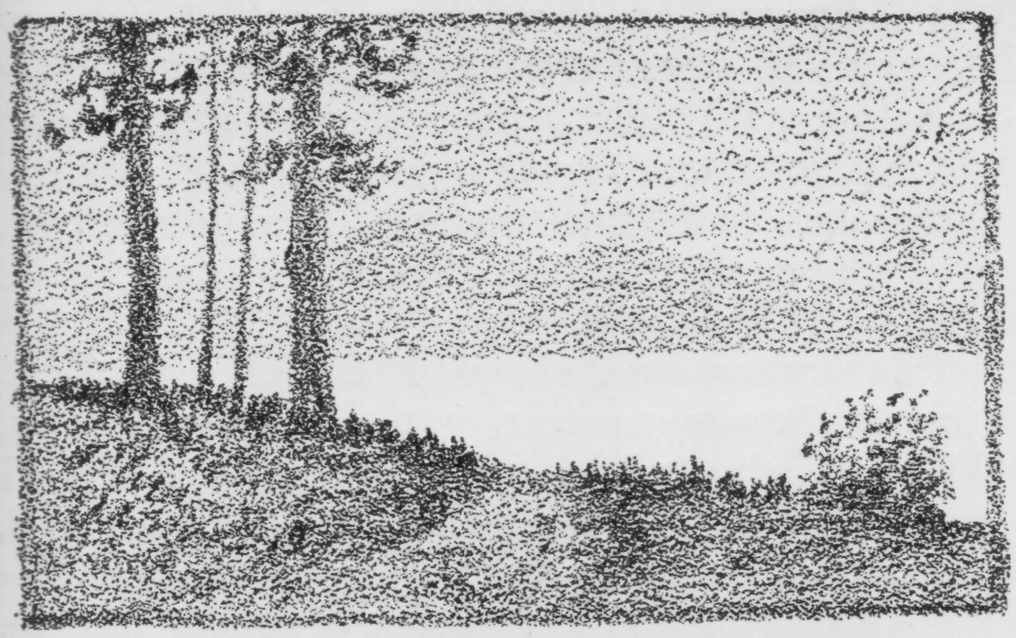


Figure 49

be reversed. Both are painted with the complementary colors yellow and violet. In one the sky is violet and in the other yellow. The land and tree are violet over yellow, that is, one wash painted over the other. In the same manner the colors in Plate V may be reversed. A landscape painted with the complementary colors blue and orange may be reversed in the same manner.

Figure 49 is an excellent example for two colors. It may be painted with the complementary colors blue and orange as follows: Paint the sky down to the land of the foreground with a light wash of blue. With the ruler and a light pencil line, mark the horizon line, which is where the water and the mountain join. Paint the mountain with the same

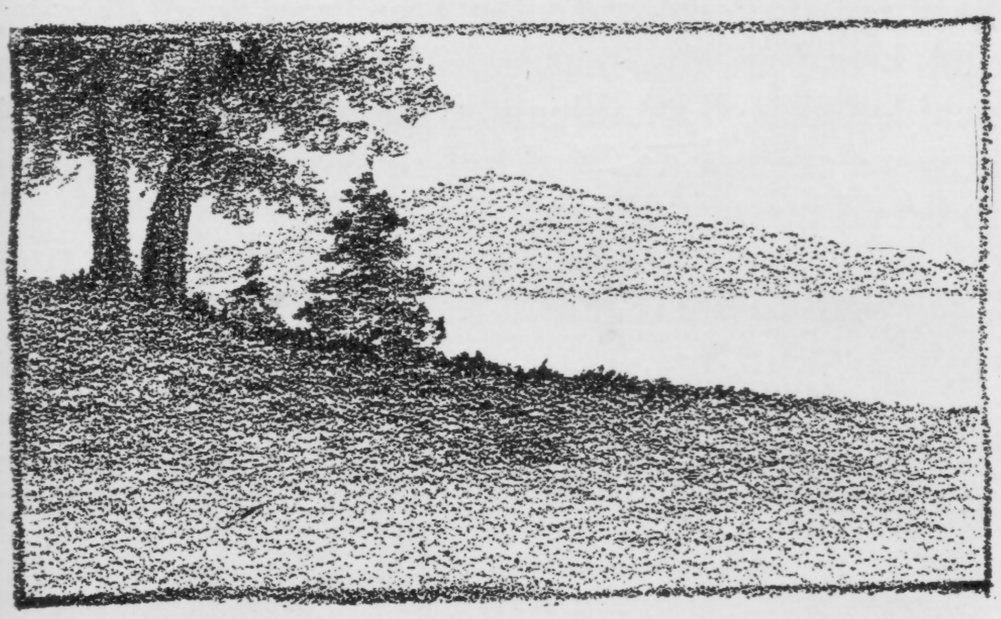


Figure 50

color. Paint the foreground and trees with a strong wash of orange and into this wash paint the details with blue.

Colored Plate V-a is a similar drawing, showing how it appears in color. It is painted with blue and orange.

The same drawing may be painted with yellow and violet and in the same manner, by substituting the violet for the blue and the yellow for the orange.

Figure 50 is similar to Figure 49 except that the trees and values are different. Colored Plate V-b shows the drawing painted with the complementary colors blue and orange, the same as Colored Plate V-a, only the colors are reversed. It may be painted in blue and orange as follows: Place a strong wash of orange over sky, mountain and lake. With a ruler and a light pencil line, mark the horizon line; paint the mountain with blue and then tone it down with orange. Place a strong wash of orange over the foreground and over it paint a wash of blue. Make the foreground strong in color and use both blue and orange for the details.

The landscape may be painted with yellow and violet in the same manner, using the violet in place of the blue and the yellow in place of the orange.

A Snow Scene. Figure 51 may be very effectively painted with black with a few added touches of brown in the tree-trunks and rabbit.

The picture may be painted with the complementary colors blue and orange, as follows: Paint the sky, distant wood and the tree-trunks with blue, and grade the blue into the snow of the fore-

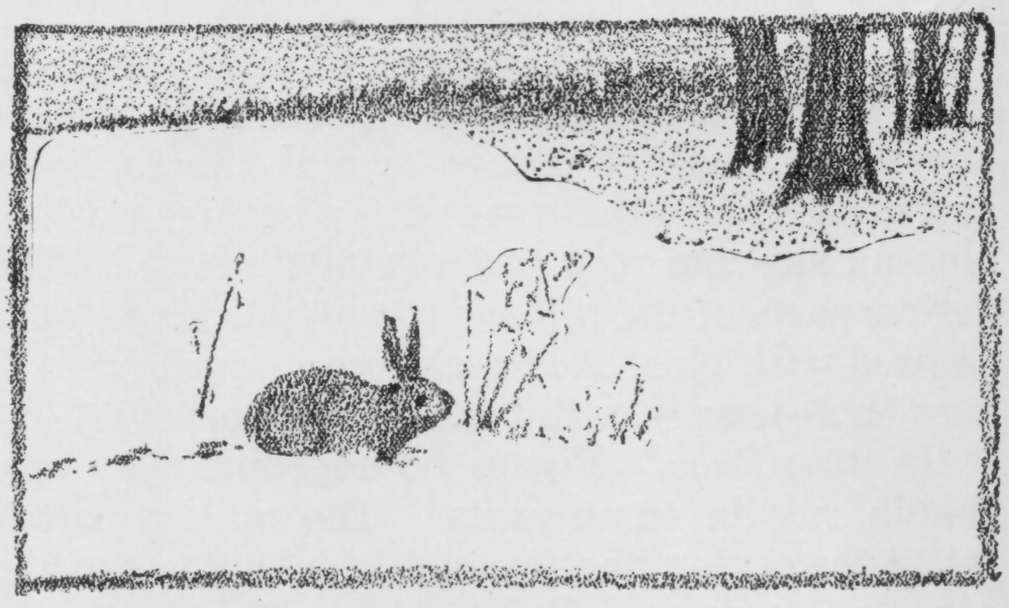


Figure 51

ground. Work some orange into the tree-trunks, making the orange predominate in the nearest one. Paint the rabbit in the foreground with orange and the details with blue.

Colored Plate III is painted with the complementary colors yellow and violet; Figure 51 may be painted in the same manner and with the same colors. Blue and orange may also be used in the same way.

Colored Plate III is painted with the colors yellow and violet. Place a strong wash of yellow over the sky and extend a light wash of the same over the land part to make the over-wash of violet less

Figure 52

sharp. Paint the distant wood with violet and blend it into the middle distance. Paint the tree in the foreground with violet and yellow.

Figure 52 is a very pleasing landscape. Paint it at first with one color such as black, to overcome the mechanical difficulties, after which it may be painted with any of the complementary colors.

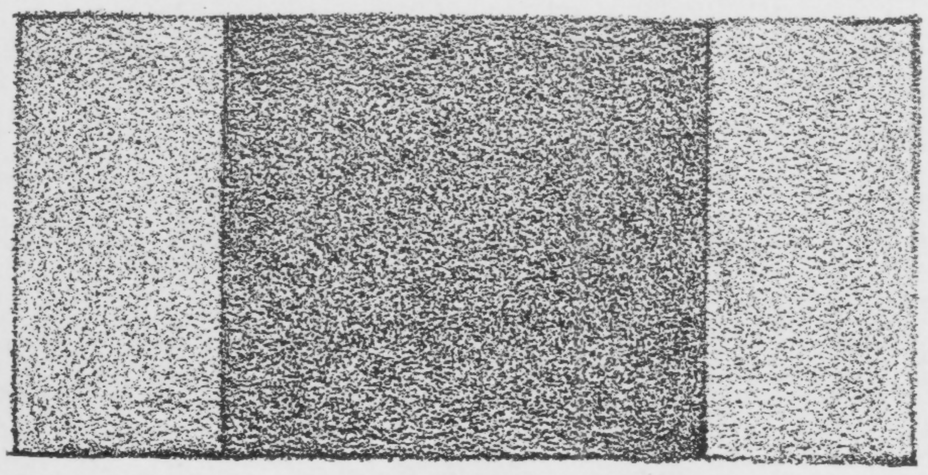


Figure 53

Paint it with the complementary colors blue and orange as follows: Place a wash of blue over the sky and a wash of orange over the trees, house and land. Paint the trees with a heavier wash of blue as also the roof and side of the house. The darker parts of the hill and the details may also be painted with blue. Add such correcting touches as may be necessary with both blue and orange.

Painting Rugs. Figure 53 represents a very simple rug in three parts. The middle part is called the center, the two ends the border and the edges the margin. Paint the rug first with red and then with brown, being careful to blend the margins so they will not be too abrupt.

It is well for purposes of drill to paint two rugs with the same color, painting one dark and the other light. The dark washes are much more difficult to handle than the light washes; this is because they are more difficult to keep clear. A dark wash needs to be carefully gone over with the sharpened point of the crayon.

The rug may be painted with the complementary colors red and green as follows: Place a strong wash of red over the whole rug. Carefully blend in the margins with the sharpened crayon. Go over the center with a strong wash of green, making the wash smooth and even with the point of the crayon.

Reverse the process. Place a strong wash of green over the whole rug and a wash of red over the center. The rug may also be painted in the same manner with blue and orange, yellow and violet, and also with the secondary colors, green and orange, green and violet, and orange and violet.

By means of stripes and bands, rugs may be made of great variety and the plan extended to blankets, pillows, cushions, portieres and similar objects.

Colored Plate VI represents a complete landscape, that is, it contains a sky, distance, middle distance and foreground. It is painted with blue and orange, thus; First, place a wash of orange over the foreground and tree, then a wash of blue over the sky and water, adding the mountain with the same color. Place a lighter wash of orange over the middle distance and finish it with blue. The foreground is finished with both orange and blue, gradually working in the details with the sharpened crayon.

This landscape may be painted with yellow and violet in the same manner, or with black and brown. When painting with black and brown, use black for the sky and distance, brown for the foreground, and combine the two for the middle distance.

Colored Plate VI-a is a very simple picture, painted with the complementary colors yellow and viotle. It is painted as follows: Place a strong wash of yellow over the land and trees, then a wash of violet over the sky. Into these two washes paint the details with both yellow and violet.

In the same manner the picture may be painted with blue and orange, also with black and brown, using the black for the sky and the brown for the land.

Paint the landscape with blue and orange as follows: Place a heavy wash of orange over the sky and a heavy wash of blue over the land and then make the details with both orange and blue. This method is similar to Colored Plate VII.

OBJECT PAINTING

Objects suitable to paint in colored crayons should be simple in form and color, free from small details, and broad in the masses. Little parts should be avoided as well as objects of many colors. Colored crayons are not adapted to fine details, but rather to broad masses of light and shade.

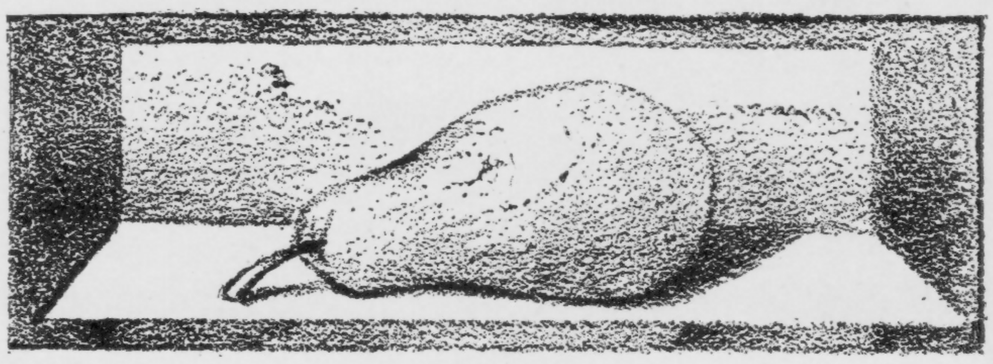


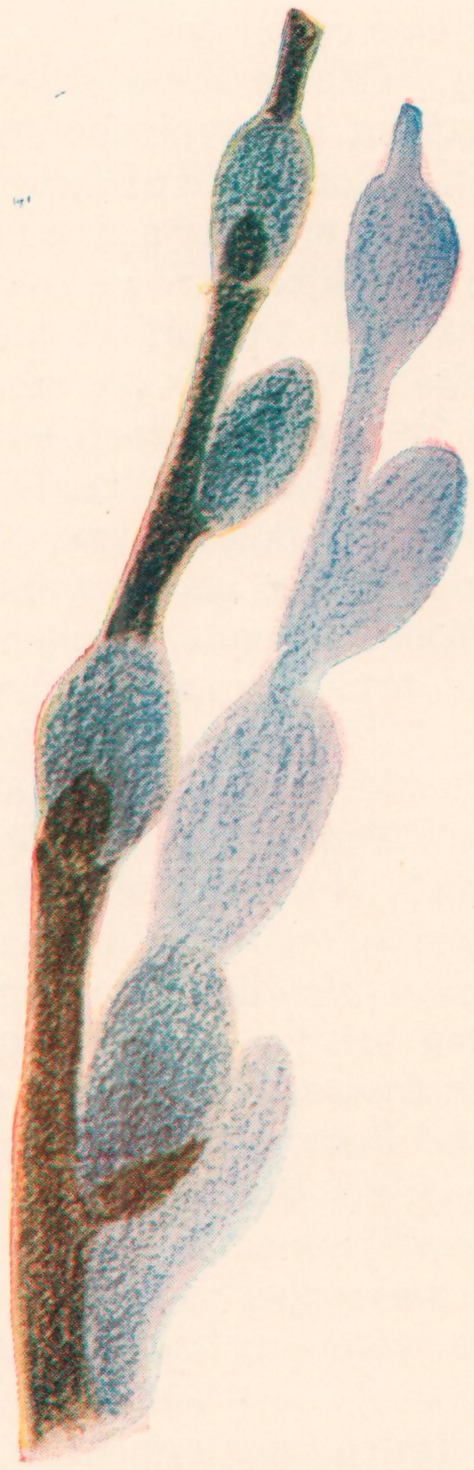
Figure 54

Place objects such as fruits, vegetables, nuts and similar models in an L-shaped background, made by folding once a sheet of the same kind of paper on which the drawing is made. Figure 54 shows the L-shaped background with a pear placed ready to be drawn.

The following objects are suitable as models to be painted with colored crayons:

Grasses and similar growths, such as the clover, flax, sorrel, alfalfa; rushes and grains; weeds of simple forms, and the sprouting pea, bean, corn and grain. Pin the model to a paper background that is like the paper on which the drawing is made. Color direct with very little drawing and with only a light pencil line to mark the directions

Colored Plate XII



Colored Plate XIII

Colored Plate XIV

and indicate the position of the parts and to show the proportion.

Buds and Leaves. Colored plates XII and XIII show the correct form in preparing the models. One, two or three buds or leaves on a stem is enough. Confusion is often caused by too many parts. Choose leaves with smooth edges, like the lilac. In the choice of a model remember that "simplicity is the supreme excellence."

Fruit and Vegetables. Choose these objects of a distinct color. A banana is a typical object, of one color, characteristic in form, and of convenient size. A yellow, red, or green apple or a ripe tomato is also typical. Place the objects in an L-shaped background and paint both the object and its shadow. Colored Plate XIV shows an excellent model. Draw one, two, or three in a group, as more will be found confusing. Colored Plate IX is a good example of a group. Apples, pears, plums, peaches, currants, gooseberries, cherries, grapes, lemons, oranges, radishes, carrots, cucumbers, pumpkins, gourds and prunes are all good if well chosen.

Flowers. Flowers should be of one color, as the buttercup and the violet. The dandelion in Colored Plate X is a fine example. If the flower is of more than one color, then the colors should be distinct and separate, not blended together or so complicated as to confuse the painter. It is better to draw and paint single flowers at first until some power has been gained. Remove from the model all parts that are confusing. Buttercups, pansies, poppies, yellow marguerites, sunflowers, sweet peas, dandelions, iris, anemones, violets, geranium, narcissus, rosebuds, water-lily buds, and many others may be used.

Birds. Mounted specimens are necessary, as a learner could hardly draw from as animated an object as a live bird, which is changing its position every moment. The models should be of one color, few markings and of simple form, like the bluebird, yellowbird, blackbird, oriole, robin and blue jay. Butterflies of simple markings are very good.

Trees. Trees are among the finest of models, not only because they are interesting, but on account of the freedom that may be exercised in the painting of them. Aim for the general form and color. Avoid details. For first efforts choose a tree of thick foliage and standing alone with the sky or water for a background. Draw and paint the tree a number of times rather than skip from tree to tree. Do not stand close to the tree when painting it, but far enough away to eliminate the details, such as the leaves and smaller limbs. The maple is an especially good tree to paint, and so are the thorn, the elm and the apple.

Bits of Landscape. Look for single objects and for plainness of background. Look for the big truths such as general color, form, value and character. Minimize the little details that surround the object. Remember, you do not have to represent all that you see, but only those parts that you want to show in your picture. Ask, "What do I wish to represent?" Answer the question, and then act. The following will suggest what to look for: A stump, a log, a large stone, rocks, a bunch of grass or rushes; corner of fence, an old trough, gate, bars; an old mill, tower or bridge; a footbridge, a bend in the road; a shock of corn, wheat, oats or flax; the end of a wharf, a boat at anchor, a buoy; any object projecting from the land into the water, such as a point of rocks, an old tree-trunk or a point of land; an old barn, shed or shanty.

Common Things. Objects should be free from decoration, of simple form and of marked color, and if of more than one color they should be separate and distinct. Place against a background of a color as near like the paper on which the painting is made as possible.

Bright colored pottery, especially stoneware, Japanese lanterns, such as those in Figure 55, bright, yet plainly dressed dolls, freshly baked biscuit or bread, a new berry peach or grape basket and similar objects, make very good models for painting.

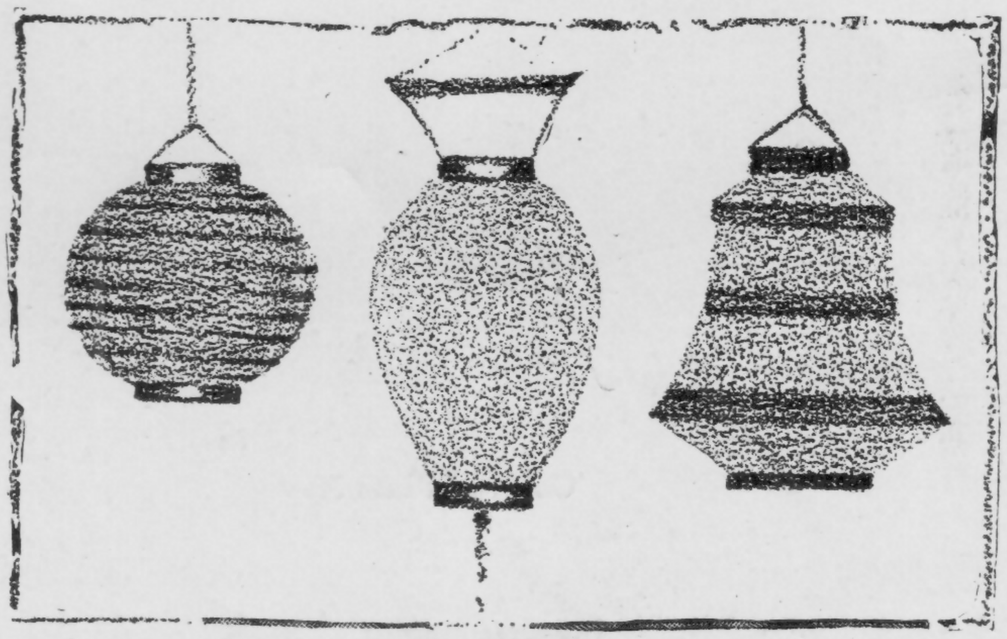


Figure 55

History Told Through Stories

By BERTHA E. BUSH, Author of "Great European Cities," etc.

Two Little Pilgrims of Plymouth

The Pilgrims who came to New England in 1620, landing at Plymouth, were a band of Puritans who had separated themselves from the Established Church of England and on account of persecution and inability to worship God in their own way, had gone to Holland in 1608. Though welcomed in Holland and prospering there, they did not desire to become part of the Dutch people, or have their children grow up as such. They therefore decided to go to America and occupy part of the English territory there. They left Delft Haven in 1620 and sailed from Southampton August 5 in two ships, the *Mayflower* and the *Speedwell*. On account of the condition of the latter they returned to port, and finally sailed September 5 from Plymouth in the *Mayflower*. There were 102 persons aboard the ship, representing 41 families, and the stormy voyage lasted 63 days.

WHAT are you doing, children? Resolved, what are you hiding behind your back? Perseverance, you are hiding something too. Show me what it is, this minute."

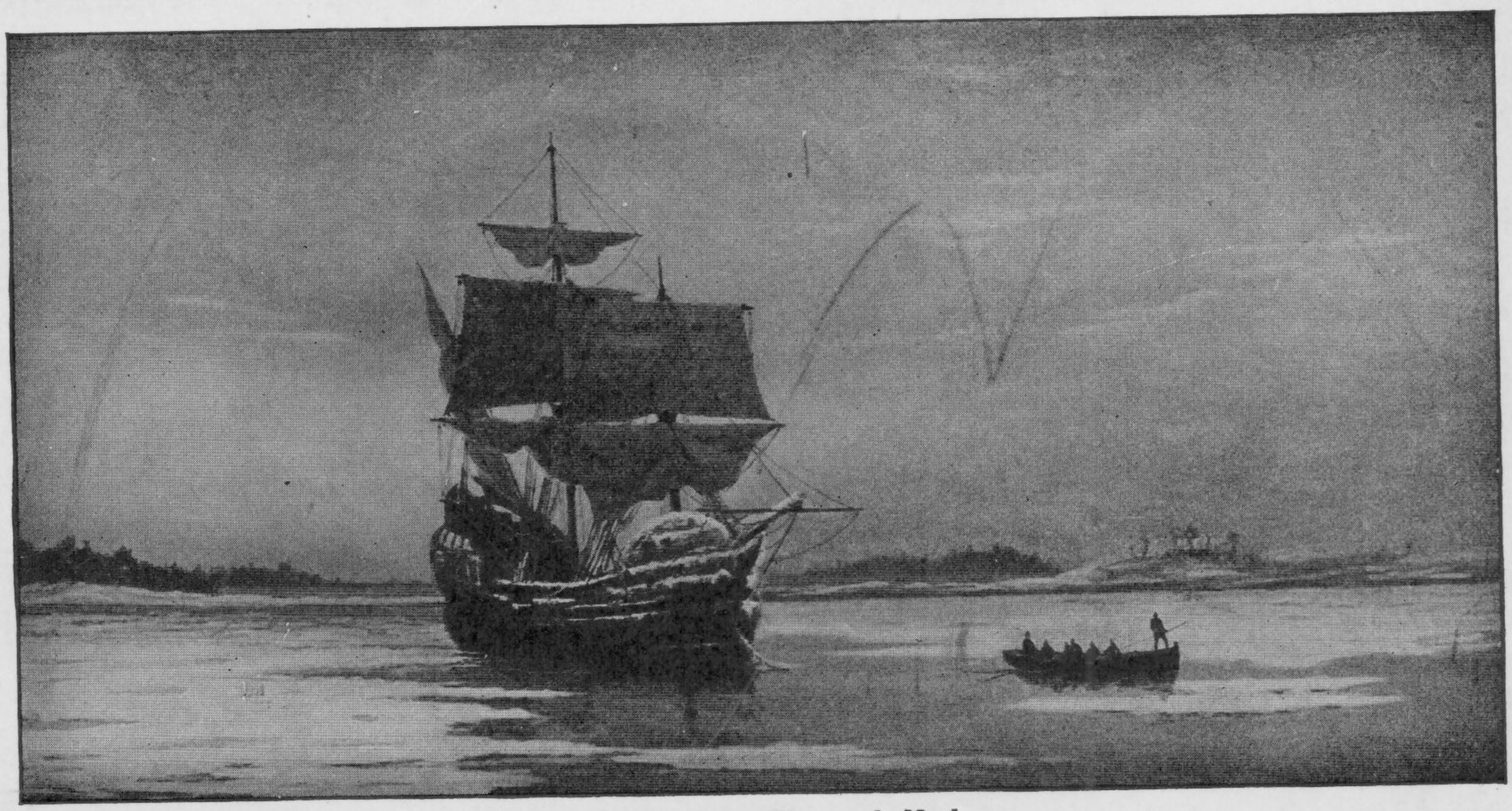
Reluctantly the little boy and girl drew their hands from concealment. It was not safe to disobey Humility, for she believed in the strictest Puritan discipline. She was stricter with the two children than their mother, Susanna White, who was lying in her berth with the new baby Peregrine at her side.

"It is only bread, Humility. I heard you and Desire say to each other that there was only a little flour left in the Mayflower and few supplies beside, and that you feared we might all starve. And I thought we had better begin to put away a part of our portion daily, so that mother and the baby wouldn't starve."

The girl's keen eyes softened, as the eyes of every one on board the Mayflower were apt to do when that precious new baby was mentioned. She knew that little Peregrine's brother and sister were making a real sacrifice. She knew just how hungry they were, for she was hungry herself.

"Eat your bread," she said quite gently. "We are not going to starve even though our store of provisions may be low. Master Carver spoke to the men particularly as they started out yesterday, and told them to seek out some Indians and purchase food from them. Eat your bread. It is little enough."

Perseverance and Resolved ate their morsels obediently, but hungry though they were, they made wry faces when it went down. Bread made



The Mayflower in Plymouth Harbor

of mouldy flour wet with sea-water is not good to the taste. But it was not this that made the tears spring to Perseverance's eyes. She clutched Humility's hand, trembling.

"Oh, Humility, I am so afraid of those savage Indians. I am so afraid they will kill my father

Settler's Cabin

and the other men who have gone out exploring."

To the amazement of the two children, Humility's face suddenly turned white.

"I'm afraid, too," she whispered. Then Resolved grew mentally a foot taller. It had never struck him before that Humility could be frightened. A mighty sense of manliness sprang up in his boyish soul. In a flash it came to him that Humility and his mother and all the women in the Mayflower were only little girls like Perseverance grown tall. The men were gone. He must take care of them.

"Don't be troubled," he said in a tone quite different from the small-boy one he had used a moment before. "We need not fear while Captain Miles Standish is with them. He is brave enough and wise enough to overcome savages. No harm can come to the men while he is leading them."

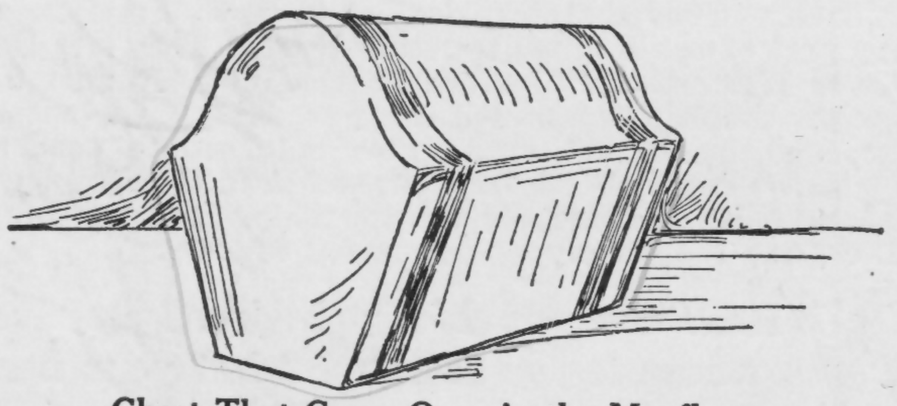
"He can't keep the savages from shooting at them," answered Humility, but she felt comforted.

The Mayflower lay at anchor in Cape Cod Bay, and the men had set out in the shallop to find a place along the shore to build their new homes. Perseverance and Resolved had hung over the gunwale to watch them, although it was so bitter cold that even the bright sunshine did not take off the chill. The children had never before seen a climate like this, and neither, in truth, had the grown-ups. White lay the snow on the hills in front of them. The trees that came down to the water's edge were loaded with snow. The snow was so deep that those who landed on shore fairly floundered in it. They had never seen such snow in England. They had never felt such cold in England. It was only November, and yet the salt spray froze on the garments of the men who put off in it and on the cordage of the ship until it was encased in rattling ice.

"O-oo!" shivered Perseverance, "I thought when we got to land we could get off the ship, and I know mother thought so too. I'm so tired of staying on shipboard. It's so dark and so crowded and so damp and it smells so. And when I come up on deck it's so cold I am like to freeze."

"Never mind," said Humility, consoling in her turn. "A girl who has as nice a new baby brother as Peregrine ought to be thankful anywhere."

"We are thankful," answered Resolved for her. "But, Humility, it was but thinking of baby Peregrine that made us want to save the bread. If we do not get some provisions from the Indians there is danger of starving. I think we had better put



Chest That Came Over in the Mayflower

aside a portion of our food allowance every day to serve if dire need comes."

"Wait till Master Carver tells you to do so," said Humility. "It is little enough as it is."

But Governor Carver did not need to give any such order. The exploring party came back with ten bushels of a strange new grain which some called Indian corn, and others Guinny wheat or Turkie wheat. It was yellow and hard, but the women, looking at it, pronounced their decision that it might be made eatable by being boiled for many hours. Miles Standish's great iron pot was got out and the corn set to boiling at once.

Baby Peregrine and His Cradle

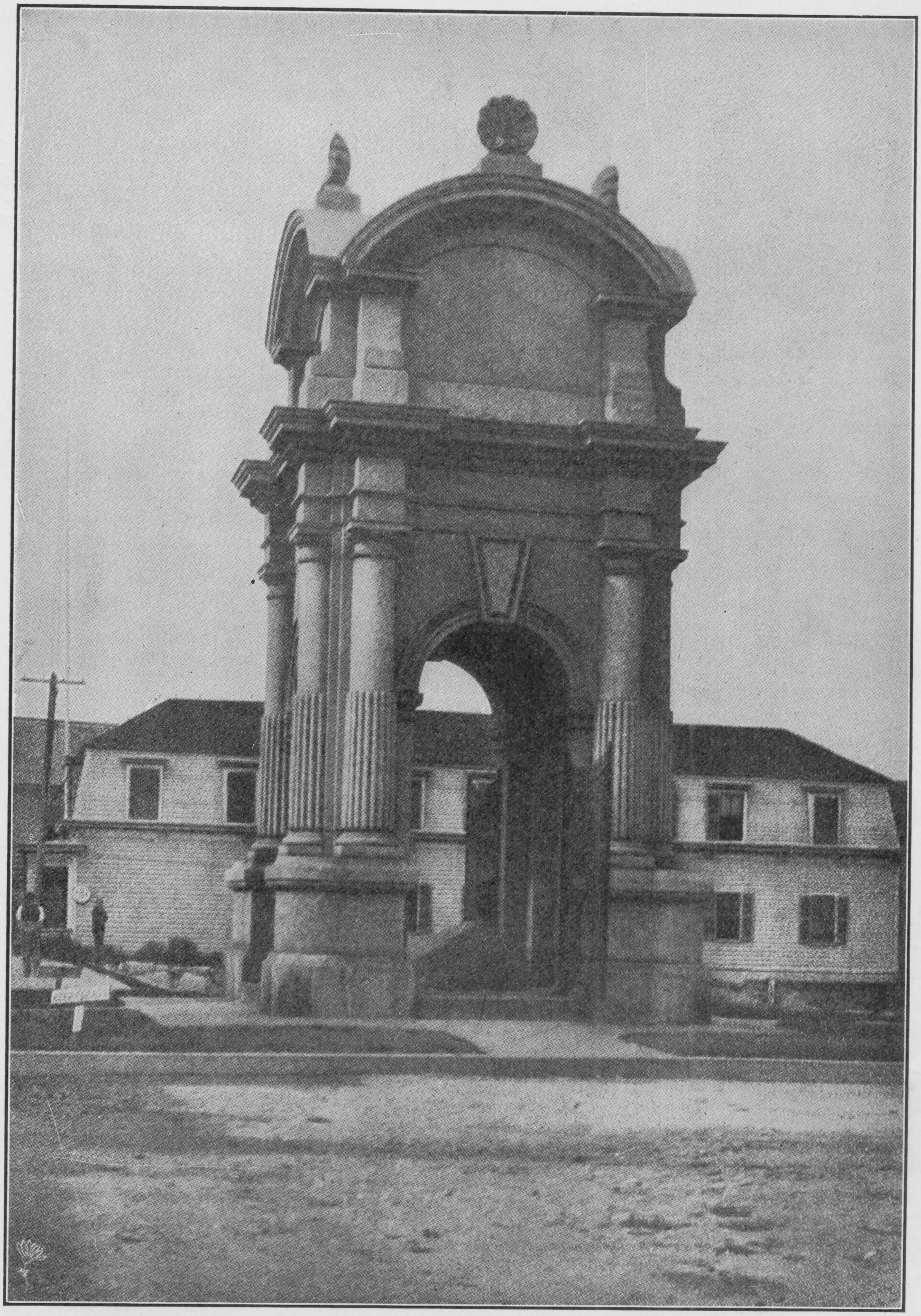
"Did you get it of the savages, father?" asked Resolved.

"Yes, but not from live savages. We found it buried in an Indian graveyard. The only thing we got from the live savages is this."

He held out a handful of arrows, some tipped with brass and some with eagles' talons. The children shuddered.

"Did they shoot them at you, father?" asked Perseverance in a quavering voice.

"Yes, they shot them at us. But



MEMORIAL ARCH BUILT OVER PLYMOUTH ROCK

Cope

Departure of the Pilgrims from Delft Haven, 1620

they ran away as soon as they had shot them. They were evidently afraid of our guns and our doughty captain."

The exploring party had found a place for their village across the bay. Very soon the Mayflower pulled up her anchor and sailed across. But even then it was many days before the women and children could leave the ship. Homes must be built before they could be occupied, and the men must not only build houses; they must cut down the logs of which to build them before they could begin, and all in the winter weather with short days, bitter cold, and snow and storms such as they had never seen before.

The Army of Miles Standish

The first thing they built was a platform of logs on which they mounted their cannon to defend themselves against the savages if they should attack. Then they erected a large "common house" where the men could live while they were working and not have to row through the icy sea each morning and evening to the ship. The cold was something they had never dreamed of. They got wet to the skin; their wet clothing froze on them, and there was no way to dry or warm themselves save at great outdoor log fires which the falling, drifting snow did its best to put out.

In the Mayflower and in the log house on the shore they sickened until there were scarcely enough who were well to tend to the sick.

And there came other misfortunes. One morning very early there was a terror-stricken cry on shipboard:

"The house on shore is on fire!"

The women left on board the Mayflower crowded up the narrow hatchway and on to the deck in the cold and darkness, and wrung their hands in helpless anguish.

They could see flames shooting up, reddening the darkness with a horrible light, but it was impossible to so much as send a boat ashore until the tide came in. To see it and be a mile and a half away and able to do nothing—oh, it was awful!

"Don't cry," said Resolved bravely to Perseverance. "It makes the others feel worse. We must say something to cheer them up."

And they moved from one to the other whispering that they were sure that the men would be able to put the fire out.

"They are only children and don't realize," said the women, but nevertheless they felt comforted. And, as it happened, the children were right. The fire was put out when the building was only half burned. The stores in the upper part were consumed, but the guns and powder and shot, the most necessary of all things for their safety, were saved.

At last the half-dozen little log houses were built

Bayes

Departure of the Mayflower

and the families moved into them. But now the sickness became sorer than ever. Half of the little company died, among them William White, the children's father. Then Resolved put his arms around his sobbing mother and drew himself up so tall that he almost reached to her shoulder.

"Don't be troubled, mother," he said. "I'm your man. I'll take care of you and Perseverance and Peregrine."

All that cruel winter a whisper had been passing from one pair of white lips to another; a whisper too dreadful to be spoken aloud. "The worst has not yet come. The worst has not yet come."

"What do they mean?" asked Perseverance of Resolved. "What can be worse than this?"

"They mean the Indians," answered the boy. "They fear that the savages will fall upon us and kill and scalp us all and burn our houses. They think they may be only waiting till winter breaks up."

The thought took away all pleasure in the springtime. It seemed as if it might be true, for not an Indian had they seen since the band of savages had fired upon the exploring party and run away. Day by day the little company scanned the blue hill above them anxiously, fearing to see a hostile band of savages appear over it. The men took their guns with their spades and hoes when they went out to work at the planting. The women barred the doors of their little cabins, and the children scarcely dared to play on the street in front of their homes.

It was in March that Humility Cooper came dashing up to Mistress White's door with a face as white as chalk. Perseverance was rocking baby Peregrine in the famous hooded cradle that may still be seen in Pilgrim Hall in Plymouth. Resolved was making a garden outside, but he dropped his spade and ran into the house when he saw Humility's face.

"Indians!" Humility gasped, dropping down on the chest in which Mistress White's possessions had crossed the ocean, as if her limbs had suddenly become too weak to bear her weight. But she sprang up again and snatched baby Peregrine from the cradle.

"We must hide!" she cried, looking wildly about.

"How many Indians, Humility? Where are they?"

Resolved made himself speak calmly because he felt that he was the man of the house, but his heart leaped up into his throat.

"Only one! Coming over the hill. Hide! Hide before he gets here!"

"It won't be necessary to hide from just one Indian," said the boy sensibly. "If they were coming to attack us there would be a band. I will go and see about it and come back and tell you. Don't be troubled!"

He ran up the street, with his mother and Humility and Perseverance peering after him through the door held half-closed. To say that he was not afraid would not be telling the truth. He was only a boy, and the men and women were afraid. Straight to the storehouse the savage was stalking in stoical Indian fashion, looking neither to the right nor left. The men hastened to go forward and meet him. Resolved was glad that Captain Miles Standish chanced to stand beside him. It made him feel safer. The Indian reached out his hands. Resolved listened to hear a blood-curdling war-whoop.

"Wel-come, In-glees!"

Not one of them understood at first; they had been so sure that he would speak in some outlandish savage tone. He repeated it and then there could be no mistake. It was a message of friendliness.

"Wel-come, In-glees!"

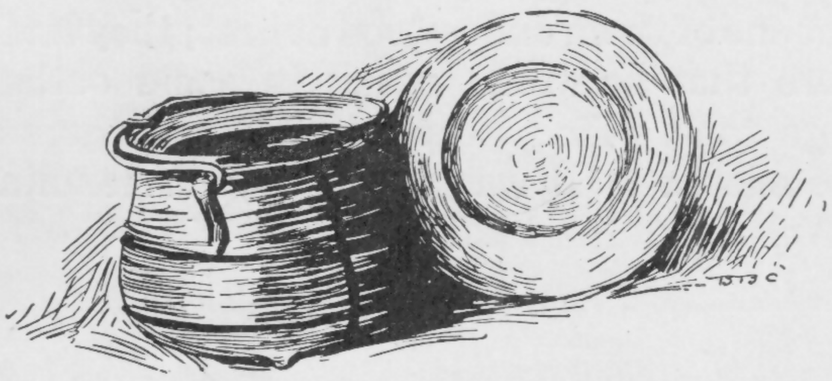
"What are you hiding behind your back?"

Children may copy and color this drawing free hand, or they may trace the design by using thin paper or carbon paper, and then color.

It was Resolved who gave the whoop It was a boyish whoop of relief. But no one noticed it. They were crowding around Samoset, asking him questions. Resolved raced back to the cabin like a bounding deer of the forest.

"It's a friend! a friend!" he cried exultantly. "Come, Perseverance! come, Humility! come, mother! There is nothing to be afraid of. Come and see him."

In your histories you can read how good a friend Samoset was to the little colony. In six days he came again, bringing another Indian named Squanto, and Squanto was the greatest help they could have had.



Standish's Platter and Kettle

Resolved and Perseverance and even baby Peregrine soon grew to be great friends with the young Indian. It was Squanto who showed Resolved how to plant his corn with three small herrings in each hill as a fertilizer, and how to tend it and care for it. But it was to Perseverance that he showed something which became for years the main dependence of the little colony. With the instinct of the hospitable housewife, she divined one day that this strange guest was feeling hungry, and she brought out to him one of their precious trencher bowls filled with the boiled corn, and a shining pewter spoon. He ate it politely—very politely for an Indian—and then abruptly left the village. They saw him no more till he came back the next day to get a burning brand from the fireplace.

"What are you doing, Squanto?" Resolved asked the Indian.

"Come, see!" answered the laconic Indian. He led them to a place where a tree had been cut down, leaving quite a high stump. On this stump

Squanto's Mill

Squanto proceeded to make a fire, scraping the wood away with a clamshell as it burned until he had fashioned the stump into a great bowl big enough to hold half a bushel of shelled corn. Next he made a great block from a portion of another log and shaped it so that it would fit into the bowl.

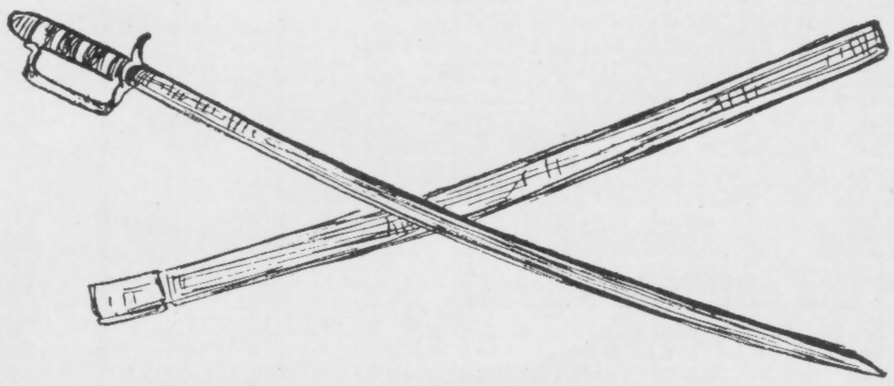
"What are you doing, Squanto!" asked Resolved again, quite puzzled.

"Make something to pound corn in for sister. Then make something good," he answered.

With strong straps of deerskin he fastened the heavy block to the top of a slender young tree. Then he pulled it down until it thumped mightily in the bowl he had made in the stump.

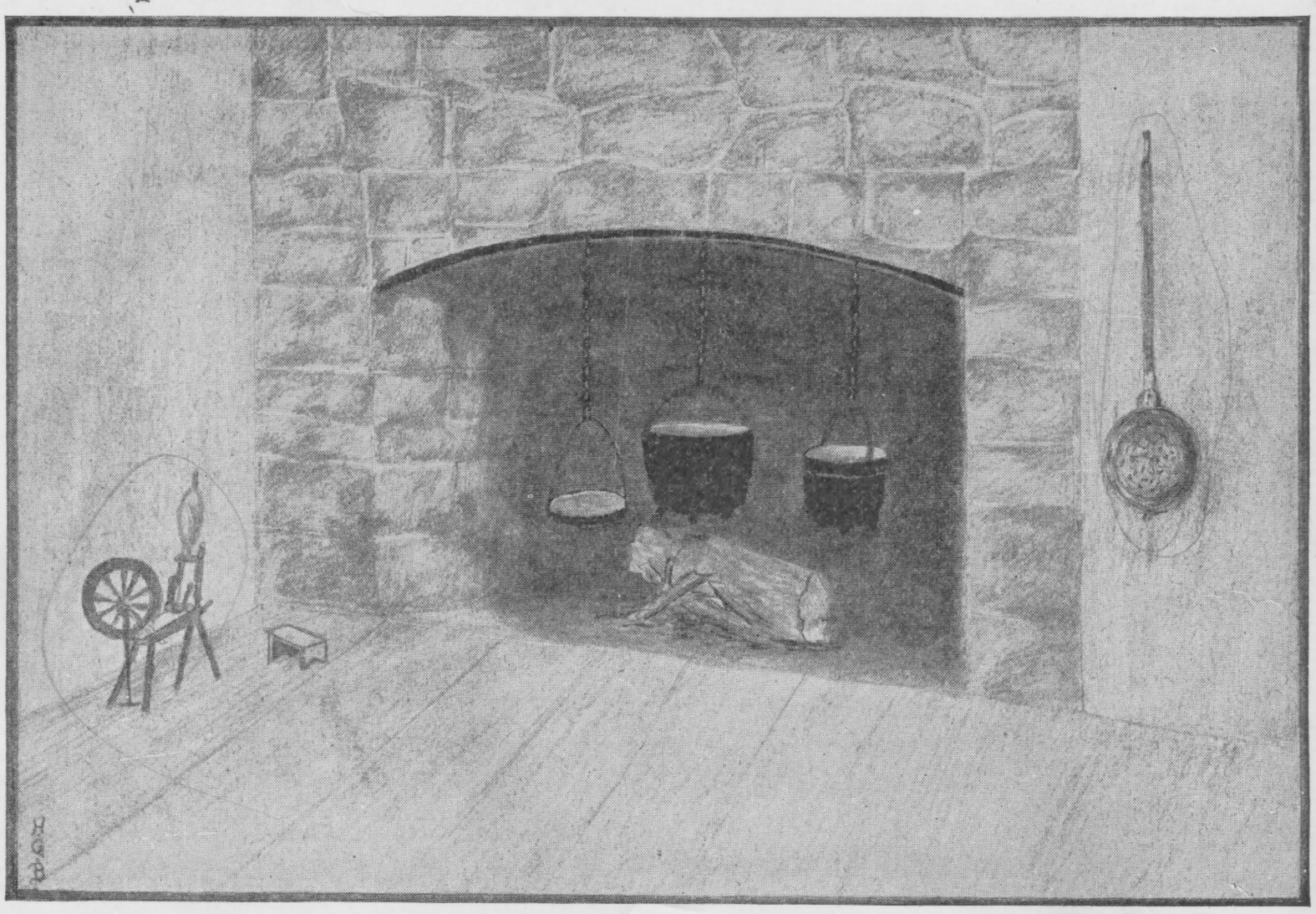
"It's a mortar!" cried Resolved. "It's a mortar and pestle!"

The Indian did not understand those words, but he nodded and smiled at the little girl. He had brought some corn from the Indian village. He filled the wooden hollow and brought the springing

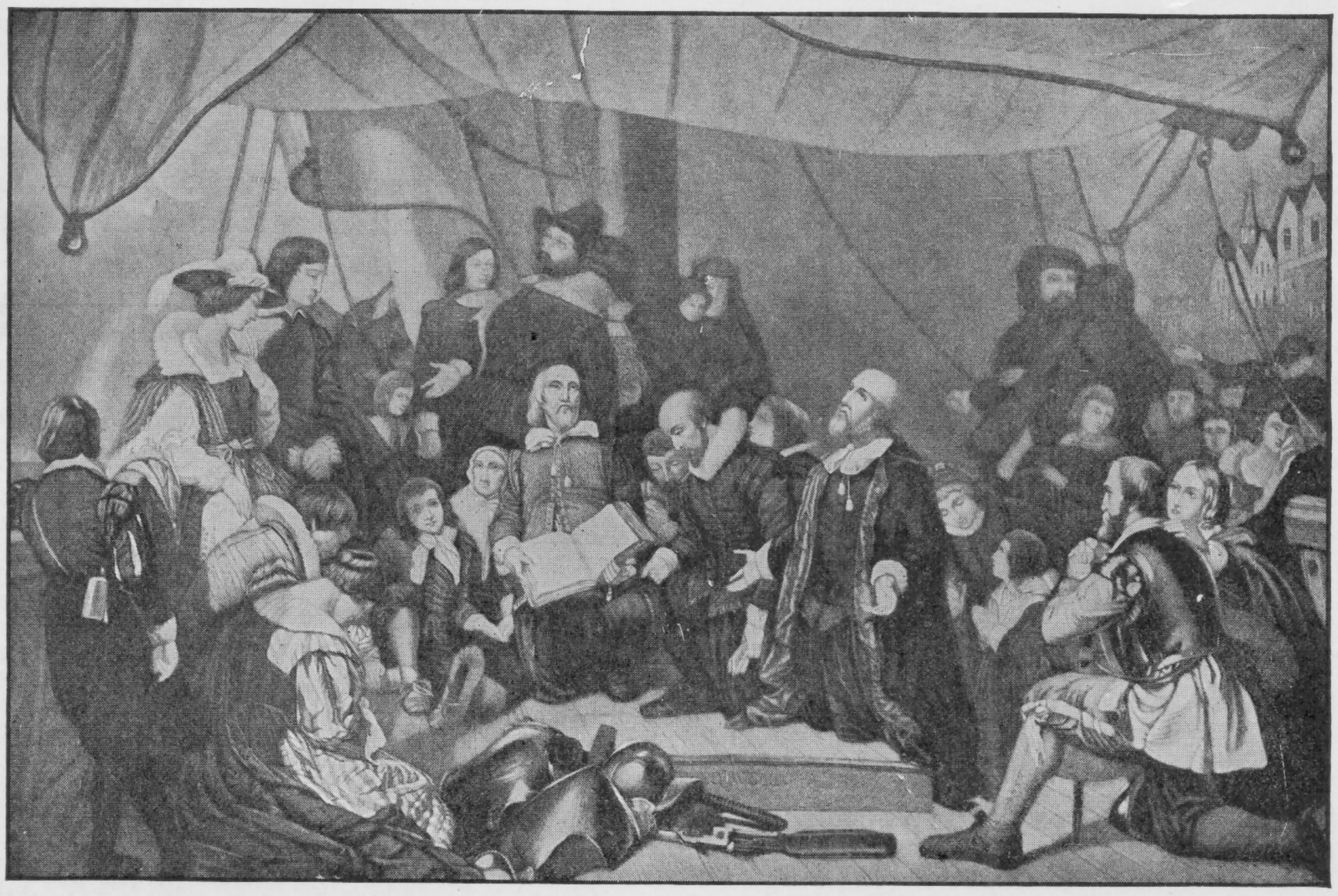


Standish's Sword

pestle down with all his might again and again, crushing the corn to meal.



Old-Time Fireplace Built of Stone



Embarkation of the Pilgrims *Weir*

"Thump, thump, thump!" went the improvised mill. By this time almost all the colony had gathered around to see. They felt that something remarkable was taking place.

But it was not to any of the Pilgrim mothers that Squanto presented the Indian basket of yellow corn meal. It was to little Perseverance with her cheeks flushed and her blue eyes shining.

"I show you how to cook," he said.

In a sort of procession they passed to Mistress White's cabin. The great iron pot was brought out, filled with water and set over the hot coals till it boiled. Gravely Squanto stirred in the yellow meal, a little at a time, with a flat paddle. It thickened and bubbled and spluttered. He cooked it for an hour, stirring frequently. Then he lifted the kettle off the coals and instructed Perseverance in his broken English to get out spoons and bowls. A portion was served to each one present.

Miles Standish took the first mouthful. It was hot and burnt his mouth, but the brave little captain made no complaint.

"Methinks with salt it would be *very* good," he said.

The Indian, who was not used to salt, refused to have his dish seasoned, but the others accepted the addition and pronounced it enthusiastically to be one of the most delicious foods ever eaten. Squanto lifted up a spoonful of it, let it cool thoroughly, and held it toward baby Peregrine.

"Good for papoose," he said. And little Peregrine swallowed it eagerly, and laughed and gurgled and reached out for more.

After that, corn meal mush, or Indian pudding, became indeed the chief food dependence of the struggling colony. Morning, noon and night they ate it. Squanto taught them how to make maple sugar. Sweetened with this, the Pilgrims considered the mush a great delicacy. They spoke often as they ate it of how afraid of the coming of the Indians they had been and what a blessing their Indian friends had proved. Historians say that

Pilgrims Going to Church *Boughton*

"Welcome, In-glees!"

This design may be copied free hand, or the children may trace it by putting paper thin enough to see through over the picture, and then transferring to a heavier paper by laying the thin paper down and marking heavily on the lines. Color the picture with water colors.

Plymouth colony could scarcely have survived without the friendly offices of Squanto and Samoset.

"The worst is yet to come," the Pilgrims had said in bitterness. But it was one of the best of God's providences that came to them when Samoset and Squanto, savagely arrayed in beads and feathers and fringes, but with hearts of pure friendliness, stalked down the single Plymouth street.

"Squanto is one of the best friends anybody ever had," said Resolved and Perseverance, and certainly they spoke the truth. And certainly we think they deserved the best of friends, this brave little Pilgrim boy and girl of Plymouth.

A Boy and Girl in Early Virginia

At the beginning of the seventeenth century, England was very eager to colonize the new world. There were many people out of work, who looked to better their condition. It was believed that English wares could be exchanged for raw materials from such colonies as might be planted. There was a surplus of capital in England, seeking investment in new enterprises. Therefore, in 1606, a company of prosperous and prominent Englishmen obtained from James I a charter—or permission—to plant colonies on the American coast. The territory was to be exploited by two groups of adventurers; the Plymouth Company in the North, and the London Company in the South. The London Company settled Jamestown, Virginia, in 1607. The location was unhealthy. The colony at one time consisted of seven laborers and fifty-two "gentlemen," too proud to work, but not too proud to hunt gold all summer and beg all winter. They were saved from the consequences of their folly by Captain John Smith, a brave soldier of fortune who was one of the council.

SEE what I have brought you for your supper! It is something you never tasted before, and I think you have never tasted anything so good."

It was a bowl of steaming hot oyster stew which the cook had concocted from those strange shellfish called oysters that had been found in such abundance in Chesapeake Bay.

The hands that were lifted to receive the bowl were chained, but Captain John Smith, to whom they belonged, smiled at the boy brightly. Twelve-year-old Giles was the only boy in all the shipload of adventurers who were now sailing to plant the first English colony in the new world. When his father had heard in England of that wonderful coast called Virginia, where, it was told, the earth was full of gold and the rivers flowed over golden sands, he said to Giles:

QUESTIONS ON "TWO LITTLE PILGRIMS OF PLYMOUTH"

1. Where had these Pilgrims come from? 2. Why had they left Europe for the wild new world? 3. Where is Plymouth? Why did they name it that? 4. Do you know why the winter seemed so bitter to these Englishmen? 5. Why did the Pilgrims think the yellow Indian corn "strange?" 6. How is a log house built? Is it very warm? Is it safe? 7. Tell about the terror of the people on the ship when they saw the fire. 8. Why should so many people sicken and die? 9. Why did they not take ship for England? 10. Tell about the coming of Samoset? Why was he friendly? 11. Describe the making of the mill for grinding corn. 12. Why was the boiled meal mush better to eat than the boiled whole corn? 13. Why were they so enthusiastic about it? 14. Do you know what feast the Pilgrims made that autumn, to pay for the feast of corn meal that Squanto gave them? 15. What do we call it now?

"If it were not for you, son, I too would go with the ship the London Company is sending out there and make a fortune for us."

"Oh, do go, father, and take me," Giles had cried.

"How could I take you? Only men are to go."

"I am a man," cried Giles, drawing himself up as tall as he possibly could. "I'm very tall and strong for twelve years. Oh, father, do go and take me."

In the end his father had yielded to his pleadings and taken him, for there was no mother or aunt or grandmother with whom to leave him. Perhaps one reason why Giles wanted to go so much was that Captain John Smith was going.

Captain John Smith was a hero in the boy's eyes. He was a soldier, and his life had been full of marvelous adventures. He had fought with the Turks and slain three in single combat. He had been sold into slavery, and had killed his cruel master and escaped. Oh, no one else was so wonderful to Giles!

It almost broke the boy's heart when his hero was put in chains. He had begged of the cook the privilege of taking the prisoner's meals to him, and the cook, who loved Smith too, took care to make them savory.

It was just because he was so popular with all the commoner sort that Smith's jealous associates had seized upon a pretext to put him in confinement. They pretended that they feared he might take advantage of his popularity to usurp the government. But Giles's mourning was turned into rejoicing when the box of sealed orders given by the London Company was opened in Chesapeake Bay, for it was found that they had appointed Smith a member of the council.

Now he must be set free; and Giles was perfectly happy as, standing by his friend's side, he sailed up the James River toward the place where the ruins of the old church now mark all that is left of Jamestown.

It was a wonderful day in May. The shores of the river seemed carpeted and hung with emerald velvet, wondrous green velvet that was alive and waved and swayed in the sunshine. On the breeze came the most deliciously sweet smell, the smell of ripe strawberries. The landing from the ship was made beside a bank that was full of them, and oh, how the colonists feasted.

"Now to get gold!" they cried. Without stopping to unload their possessions or make themselves the smallest shelter, they rushed off to scratch the earth or dip up the sands of the river, expecting that gold would come up with every handful.

But no gold came up. They were greatly disappointed, but not discouraged. They had heard so many accounts of riches in the new world that they were sure gold must be there. Neglecting everything else, they went on hunting for it. They would not listen when Smith suggested that they build houses and plant grain. The May air was very warm and pleasant. Deer and wild duck were to be had for the shooting, strawberries for the plucking. Why should they take the time to build or to plant? They scorned the very idea. From morning till night they put in their time hunting for gold.

In a few weeks they began to reap the result of their folly. The three ships sailed for England. As long as they were anchored beside them, the colonists could go aboard and barter with the sailors for the good bread the ships' cooks made. But now they were reduced to half a pint of damaged wheat

Captain John Smith

and half a pint of barley apiece each day. Then they saw the foolishness of having planted nothing. The weather turned very hot. They had no water to drink except the water of the river, and that was salty when the tide was in and muddy when the tide was out. They slept on the bare ground, damp and miasmatic.

Sickness seized them. By September, fifty of the one hundred four had died. Then a dreadful rumor was whispered around. Giles ran to meet Captain Smith one day as he came in from an exploring expedition, and the boy's eyes were fairly wild with fear.

"Oh, Captain Smith," he panted, "something terrible is going to happen! You know President Wingfield keeps all our stores locked up in his chests! They have found out that he is planning to load them on the pinnace and sail away in it to the West Indies and leave us all to starve!"

John Smith's eyes flashed, and he looked as he must have looked when he went out against the Turks in single combat. But he spoke quietly and reassuringly to the boy.

"Don't be afraid. I will see that he does not attempt such a thing. And don't be afraid of starving. I have been making friends with the Indians while the rest hunted for gold, and they have promised to bring provisions to us for the winter."

Perhaps it was a good thing for the colonists that Wingfield's rascality did open their eyes, for now they were ready to obey Smith. He put them to building houses, and he set the example by working harder than any of the others. Gold-hunting was abandoned, and the little colony became as busy as bees getting ready for winter. All day long, axes rang in the yellowing forest. Indians came paddling up the river bringing corn and other stores.

Giles was very happy then. He managed to work where Captain Smith was working, and he was so handy about fetching and carrying, so quick to see and to do what would help, so ready and willing and faithful that Captain Smith came to like to have the boy about him as much as Giles liked to stay. Thus it happened that Giles went up the river with him on the expedition whose object was to make friends with the powerful old Indian chief Powhatan.

Powhatan had summer homes and winter homes. This one by the falls of the James was his summer home. Down to the river's edge to greet the whites he stepped, as proudly as if he were the king of England. He was accompanied by a guard of a hundred warriors.

Giles did not look as much at the stern, dark old chief, with his painted and befeathered guard, as he might have done, for the reason that he was looking somewhere else. Following after the great chief at a respectful distance came his wives and daughters, and among them was a little Indian girl of about Giles's own age who had such a sweet little dark face that the boy's eyes were irresistibly drawn to it.

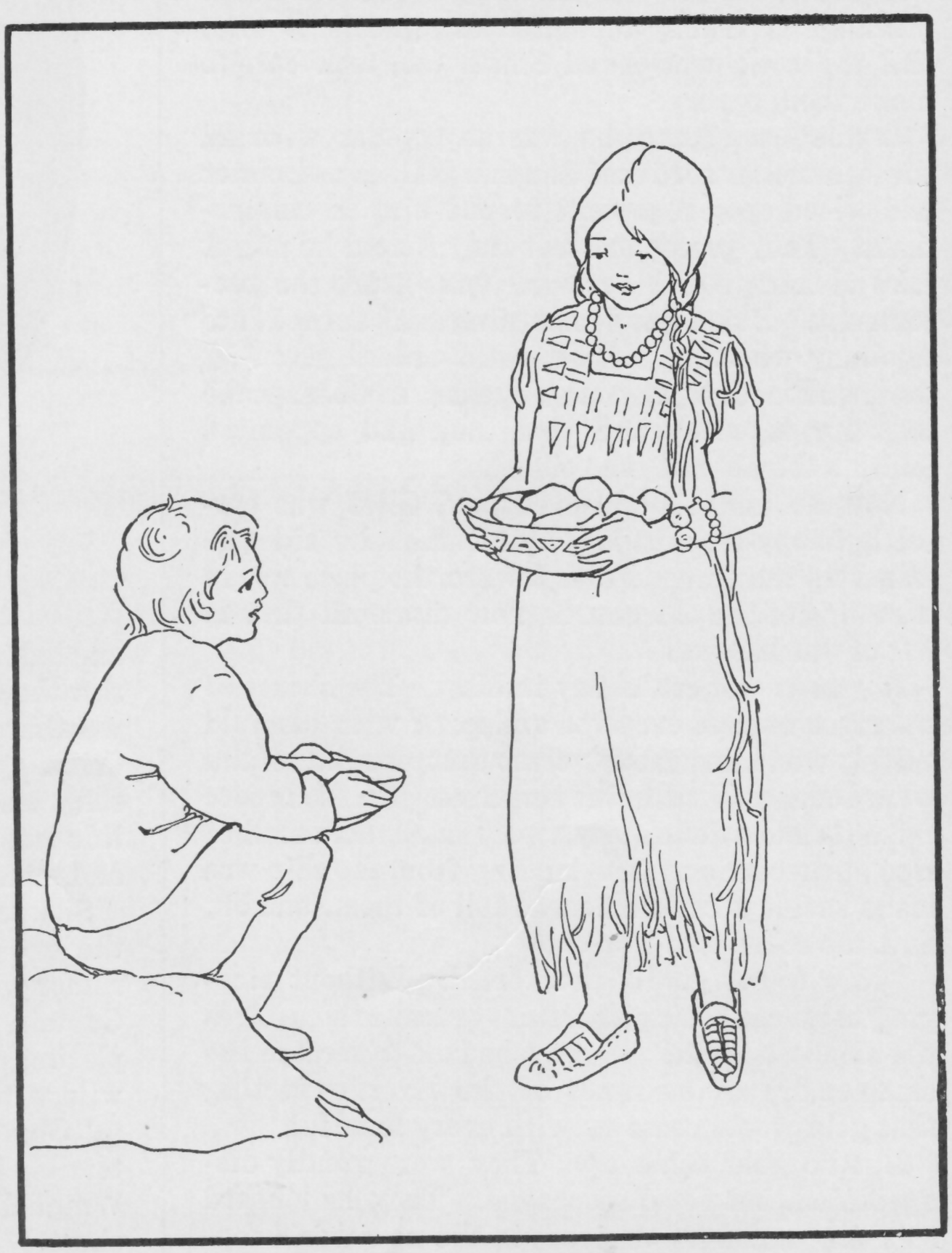
She was dressed in a robe of doeskin as soft and smooth as velvet, beautifully ornamented with beads and colored porcupine quills. On her round bare arms were bracelets of shells, and around her neck a chaplet of pearls. This was Bright-Stream-between-Two-Hills, or, in the Indian tongue, Pocahontas, the favorite daughter of the proud old chief. There was a good reason for her being the favorite, for her heart was as kind as her eyes were bright.

She had never seen a white boy before, and she looked at Giles as curiously as he did at her. They could not go and talk to each other. That would have been against Indian good manners. But some way they knew that they liked each other. While Powhatan and Captain John Smith palavered and bartered, the merry black eyes and the boyish blue ones gazed at each other with comrade frankness, and when the women and girls were ordered to bring food to the whites, Pocahontas took care to serve Giles with the fish and roasted deer's flesh and boiled corn and wild plums herself.

Powhatan promised great things; but they found out how much his promises were worth when they got back to the settlement. While they were away he had sent a band of warriors to attack it, and one white man had been killed and several wounded.

"I don't believe Pocahontas knew about it," said Giles, as, close to his beloved captain, he labored to make the rude fortifications stronger. "I don't believe Pocahontas knew about it."

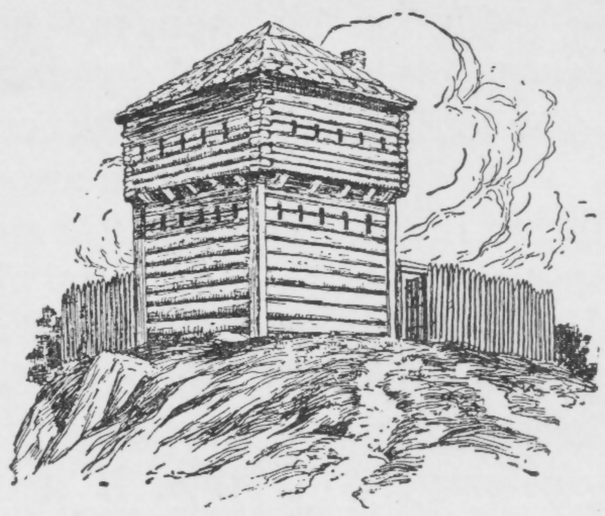
The brief impulse to industry and caution which the fear of starving and the Indian attack had given



"Pocahontas took care to serve Giles"

Use carbon paper to transfer this picture to water color paper, then color

the colonists died down. They became careless again, and wasted the precious stores that Captain Smith had obtained by so much effort. The whites despised their red neighbors, and cheated and angered them until they would furnish nothing. And then, suddenly, starvation stared the colonists in the face.



Fort at Jamestown

Their only hope was that Smith might obtain more food from the Indians. But the Indians were so angry that it was as much as a white man's life was worth to venture among them.

"Don't go," begged Giles, clinging to the captain's arm, as if he would hold him back by his boyish strength. "Let somebody else go this time. It is somebody else's turn."

"I'm afraid nobody else could persuade the Indians to give us more corn," answered the captain. "It is a question" he added to himself, "whether I can."

Giles heard it. He remembered how he had overheard some of the men saying to each other that the Indians had been made so angry by the bad faith of Wingfield and some of the other unscrupulous "gentlemen" of the colony, that they would be likely to put to death by torture any colonist who fell into their hands.

"Oh, don't go! don't go!" he cried. "The savages will kill you!"

"It will be death to all of us unless some one brings help," answered Smith. "I must try to get it, my boy."

With a heart as heavy as lead, Giles saw the shallop brought out and Smith and four other men push away on the cold river. The winter wind whistled about his ears. The cold white snow lay where the carpet of green had been. Everything was desolate, and the boy managed to keep back his tears only by remembering how unmanly Smith would have thought them.

Then came dreadful days filled with gnawing hunger and terrible anxiety, days so like each other that Giles lost count completely. He could not tell how many days it was when a man, hatless, coatless, shoeless, his clothing torn to ribbons by thorns and briars, and his face full of horror, knocked feebly at the barred door of the fort, where all the inhabitants left in Jamestown huddled together. It was one of the four who had gone out with Captain Smith, and his story was a terrifying one:—

"The Indians attacked us by the river! Hundreds of them! They killed the others, but they saved Captain Smith to torture, and I got away!"

"Where is Captain Smith?" cried Giles, his shrill boy's voice rising above the others.

"They have taken him to Powhatan's village. I think they mean to burn him to death."

This was terrible, but a glimmer of hope came next day. An Indian appeared and made signs that he had a message for the whites. When after much parley he was admitted, he took from his breast as if he were afraid to touch it, a folded piece of paper, and handed it to the acting commander of the fort. It was Smith's writing, and it told that he was alive but kept a prisoner, and that he wanted some medicine sent to cure a sick Indian in the village.

There were other directions for firing off the fort guns and doing various things to terrify the Indian messenger so that he would report to his tribe when he got back that it was useless for them to attack Jamestown. They followed these directions, and succeeded so well that the frightened savage woud not touch the medicine when they gave it to him to take back. To his mind it was powder and might explode with terrifying noise.

"Then we can't send it," said the colonists. But

Pocahontas Saving the Life of John Smith

Giles cried out in agonized protest, "Oh, we must send it! It is the one chance to save Captain Smith. If he cures the sick man they may let him go free! Let me go and take it!"

The Indian messenger, who fully believed in the virtue of the medicine, looked approvingly at the boy.

"I take care of him," he said. "Let him go."

So Giles set out through the snowy forest to carry rescue to his beloved captain. How he prayed, as he strode along behind his Indian guide,—broken boyish prayers that were not put down in the Church of England prayer-book!

When they reached the Indian village, a solemn council was assembled in the great central wigwam. In the place of honor before the great fire sat Powhatan, a young wife on each side of him, resplendent with scarlet-painted shoulders and necklaces of shells; around him his warriors and counselors and a packed mass of eager spectators.

Around the prisoner stood a ring of medicine men, hideous in horns and masks, grasping rattles made from the tails of rattlesnakes, drums or savage implements of divination. The drums were hushed. The rattles were still. The yelling and dancing of the incantations were finished and the prisoner's fate was decided.

With arms tied behind his back, he was led to a great flat stone in the center of the wigwam. His head was placed upon it. Beside him a warrior brandished a huge stone war-club. Giles and his Indian guide arrived just in time to see it. In the excitement the white boy was no more noticed than if he had been an Indian lad. Dazed with horror he stood, knowing well that there was nothing he could do, although he would gladly have laid down his life for his captain.

Then there was a little stir. From among the crowd of women a slender girlish figure darted forward. She dropped on her knees beside the stone. She took the white man's head in her arms. The great stone war-club dared not fall now, for it would have fallen on Pocahontas, the favorite daughter of the chief.

She knelt beside her father, and with pleadings whose tone the boy could understand though he did not know the words, she begged for Smith's life.

The fierce old chief scowled at her, but not for long. Who could resist Pocahontas, the sweetest of all the Indian maidens? Not her father, surely. He uttered a gruff command. Smith's bonds were loosed and he was given to understand that he was free.

Side by side with Giles he trudged back through the woods to Jamestown, followed by Indians bearing loads of the corn that should save the colonists. And if their happy talk touched again and again upon the little Indian maiden, Giles was all the more pleased. He thought of her many times in the weeks and months that followed. "I wish I could see her again," he thought. But he never dreamed how he would see her next.

There had come up in the night a terrible storm, such a storm as had never been imagined before they came to the new world. Giles lay on his bed of pine boughs and shivered. The men were asleep. He would not wake them, for he was ashamed of being afraid.

"Tap! Tap! Tap!"

Was that the beating of the branches on the roof? No, it was a knocking at the door. But it could not be made by human fingers. No one would be out in such a storm. With a confused idea that it might be the pet squirrel he had tamed coming to him for refuge from the storm, Giles rose and groped to the door. He opened it. There, drenched with rain, her wet garments clinging to her

"Giles set out through the snowy forest"

This design may be traced, transferred to water color paper and colored.

like the folds on a marble statue, her black braids dripping, stood Pocahontas.

"Come in! come in!" cried Giles, who could talk a little of the Indian language now.

"No," she said hurriedly. "I must go back. My father will be angry. But I want to tell you something. I have run in the night to tell you. The warriors of my people are planning to attack your town. I heard them plan it in my father's wigwam. Then I ran here to tell you when they thought I was asleep." Hurriedly she gave the details of the plot. Then she cried, "I must go back!" and darted away into the forest again through the storm.

Giles ran after her. It seemed dreadful to him for a girl to be out in that tempest alone. But the Indian girl was swifter than the white boy. Like a spirit she darted before him until she slipped from his sight. Her warning was given. She had done the best that she could for her white friends, and now she could only go home.

When Powhatan's warriors came to attack Jamestown they found it prepared for defense, and their attack failed. They did not know who had told of their plan. No one suspected the little Indian girl, who was seen safely sleeping on her couch of skins with the last ray of light, and sleeping again, wrapped from head to foot till nothing but eyes and nose were visible, in the morning. But the colonists of Jamestown knew, and never ceased to be grateful. The more Giles thought of it, the more courageous seemed that wild run through the storm, that kindly warning.

"She's the bravest girl I ever saw in my life," he said.

"And the truest hearted," added Captain John Smith.

A Little Dutch Boy and Girl of Old New York

In 1609 Henry Hudson, a captain of the Dutch East India Trading Company, found and explored the Hudson River as far as Troy, and carried back to Holland a load of otter and beaver skins, and glowing reports of the possibilities of the new country. In 1613 the settlement of New Amsterdam was made, on Manhattan island, at the mouth of the Hudson River. This land was claimed by the British on account of the Charter of 1606 which James I had given to the Plymouth Company. In 1619 an English captain warned the settlers of New Amsterdam that they were trespassers, but they paid no attention. In 1626 the Dutch bought Manhattan Island from the Indians for about one hundred dollars' worth of cloth and trinkets. In 1653 New Amsterdam was incorporated as a city. Besides Dutch, the new city contained Englishmen, Jews, Belgians and other nationalities. In 1664 Charles II decided to enforce the claim of the English to New Amsterdam, based on the grant of his grandfather, James I, in 1606. He sent a fleet of four armed vessels under Captain Richard Nichols to take possession of New Netherlands in the name of his brother James, the Duke of York. The fleet appeared before New Amsterdam in August, 1664. The surrender was made without a shot being fired. The English flag was run up, and the country taken possession of. The Duke of York became Proprietor and Governor of the colony, and both colony and city soon were named New York, in his honor.

OH, the Dutch companee
Is the best companee
That ever came across from the old countree!"

Heinrich was shouting this refrain lustily in Dutch—he called it singing—when Anneke, his small neighbor, ran out to tell him some news.

"The English ships are coming down on us"

Anneke was the prettiest little girl in all the colony of New Amsterdam. At least Heinrich thought so; though, being a boy, he would not have said so for anything. Her eyes were as blue as violets and her cheeks were as pink as the wild rose petals. Even her tight little Dutch cap could not

QUESTIONS ON "A BOY AND GIRL IN EARLY VIRGINIA"

1. Why was Captain John Smith in chains? 2. Do you think the adventurers had reason to fear John Smith? 3. What did they think they would find in Virginia? 4. Tell something of the adventures of Captain Smith. 5. Describe the conduct of the colonists at Jamestown. 6. How did they come to be hungry in this rich land? 7. What do you suppose made them die so rapidly? 8. What trick did the Englishman Wingfield plan, and who discovered it? 9. Tell about Pocahontas as Giles first saw her. 10. Describe the bargaining between Powhatan and John Smith? 11. How did many of the Englishmen treat the Indians, and what revenge did they plan? 12. Where did Smith and his four companions go in the winter? 13. What happened to them when they met the Indians? 14. What message did Smith send back to Jamestown from the Indian camp? 15. Why did Giles have to go back with the Indian? 16. Describe the Council of Powhatan. 17. What were the Indians going to do to John Smith? 18. How was he saved? 19. How did Pocahontas save Jamestown? 20. Do you know what became of Pocahontas when she grew up?

altogether conceal how pretty her flaxen hair was, for the unruly little curls stole out from it and surrounded her chubby face like a shining halo.

She did not know that it was pretty. She was told that it was very untidy, and she was always trying to make it lie back sleek and smooth like her cousin Frederica's. She looked a good deal like a little scarlet tulip as she stood there in her full red skirt held out by a great number of petticoats and her slim little green waist, only no tulip could be half so sweet.

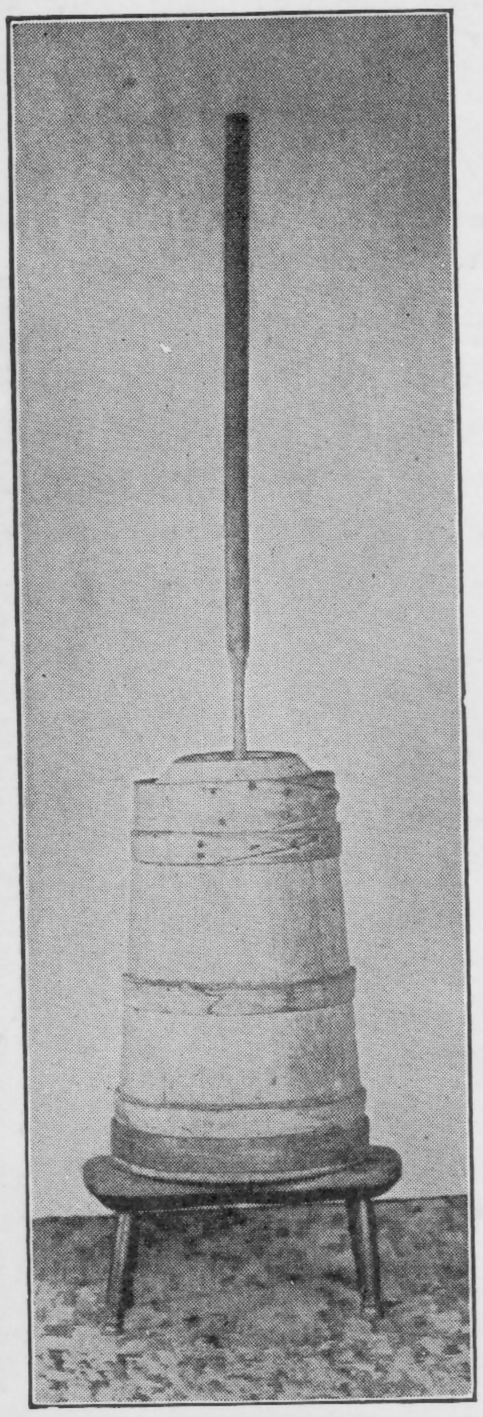
Like a tulip swaying in the wind, she rocked to and fro in excitement. Even her voice trembled as she quavered forth breathlessly the greatest news that had ever come to the colony.

"Oh, Heinrich, the English ships are coming down on us! They have ever so many cannon and they will batter our houses all to pieces!"

"Why, that can't be so!" cried Heinrich in astonishment. "You are only a girl, Anneke. You couldn't have understood. Our governor had particular word that the English fleet was sailing here only to settle certain matters in their own colonies. They will not fire their cannon at us."

"Oh yes, they will," answered Anneke. She looked half frightened and half pleased at the excitement. "Governor Stuyvesant has had new word. As soon as he received it he issued orders that every man in New Amsterdam should go to work with the soldiers fortifying the city."

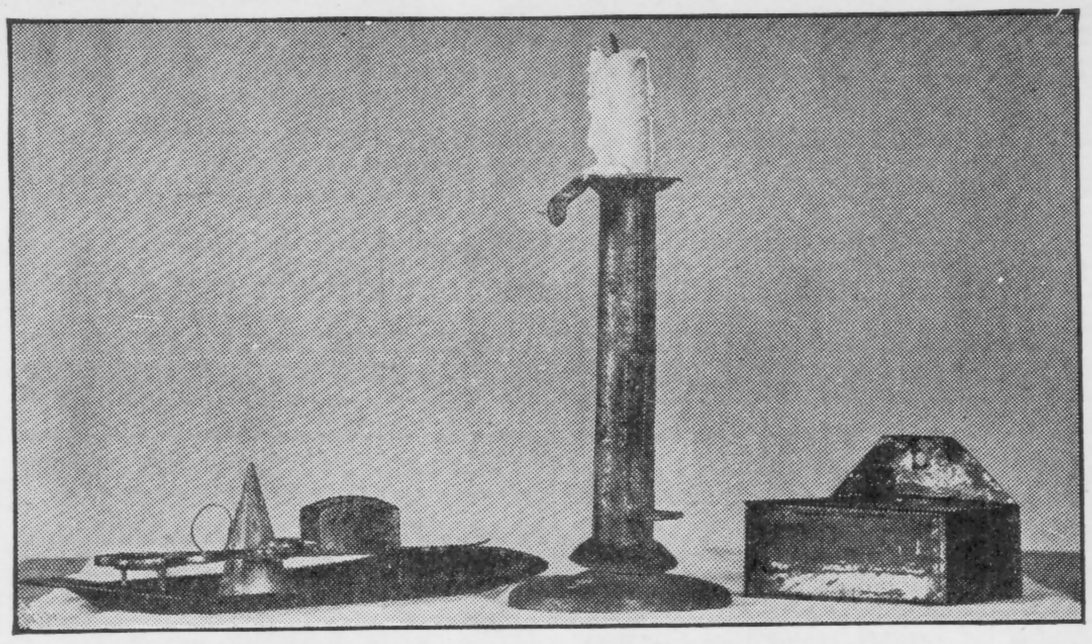
"Has he? Then I'm going." Heinrich did not stop for another word of explanation. He was off like a shot though Anneke called after him, "Don't you go. You're not a man. You're only a boy!"



Wooden Churn

"I'm big enough to handle a spade," he called back to her. Straight to the water's edge he sped where already men were beginning the digging. But he did not go because he was so anxious to help in the fortifying of the city, he went to be in the excitement of it. The grown men did not seem so very anxious to work either. There was as much talking as plying of spades and both were far from complimentary to the Dutch governor, Peter Stuyvesant.

"The English have more liberties than we," they grumbled. "And when we asked our governor as respectfully as was possible, to give us some such liberties, he flew into a passion. He refused everything we asked for and dismissed our delegates as if they had demanded something wrong. He didn't owe his authority to the people, he said, but it was given him by God and the Dutch West India Company. But we believe that God is on the side of free rights; and the Dutch West India Company is not worth fighting for since they refuse to give us what is for our best good. We'd rather surrender to the English who will."



Candlestick, Matches, Snuffers, Extinguisher, Tray

All along the line such grumblings were heard, and the spades moved but slowly.

He was a good man, this fiery governor Peter Stuyvesant, and a brave one, but he did not believe in popular liberty and he had not won his people's love. He really wanted their good, but he wanted it to be brought about just according to his own ideas. He had lost a leg fighting for his country and so wore a wooden one trimmed with silver, and was called Old Silver Leg.

Old Silver Leg stumped up and down where the men were at work, doing his best to rouse them to resist the English, but he did not succeed very well. Before long the English fleet was anchored in the bay, and the English commander sent a letter offering the inhabitants of New Amsterdam all the rights of Englishmen if they would surrender,

"There was as much talking as plying of spades"

and declaring that if they did not, the English ships would reduce the city with their cannon.

Governor Stuyvesant was very angry. He tore the letter into pieces and ordered the people to arm

"He tore the letter into pieces"

themselves to resist. But the people did not want to fight. They filled the streets with hisses and groans for the governor.

"I will never surrender the city. I will see it reduced to ruins first," he declared.

"It will be reduced to ruins indeed," the Dutch fathers declared ruefully. "The English have over a hundred cannon and ships full of soldiers. We have only twenty cannon and a hundred fifty soldiers. Our houses will be battered to pieces and we may all be killed. We do not want to fight the English. We want to surrender to them."

"I will never surrender," answered brave Old Silver Leg.

Then the Dutch mothers called all their children to them, and scrubbed and washed and combed them until their round faces fairly shone with cleanness. They would have done that no matter what was going to happen. Then they marched them, Heinrich and Anneke and Katrina and Neltje and Jakobus and all the rest to the governor's house. An awed and scared little group, they stood before him with the mothers just behind.

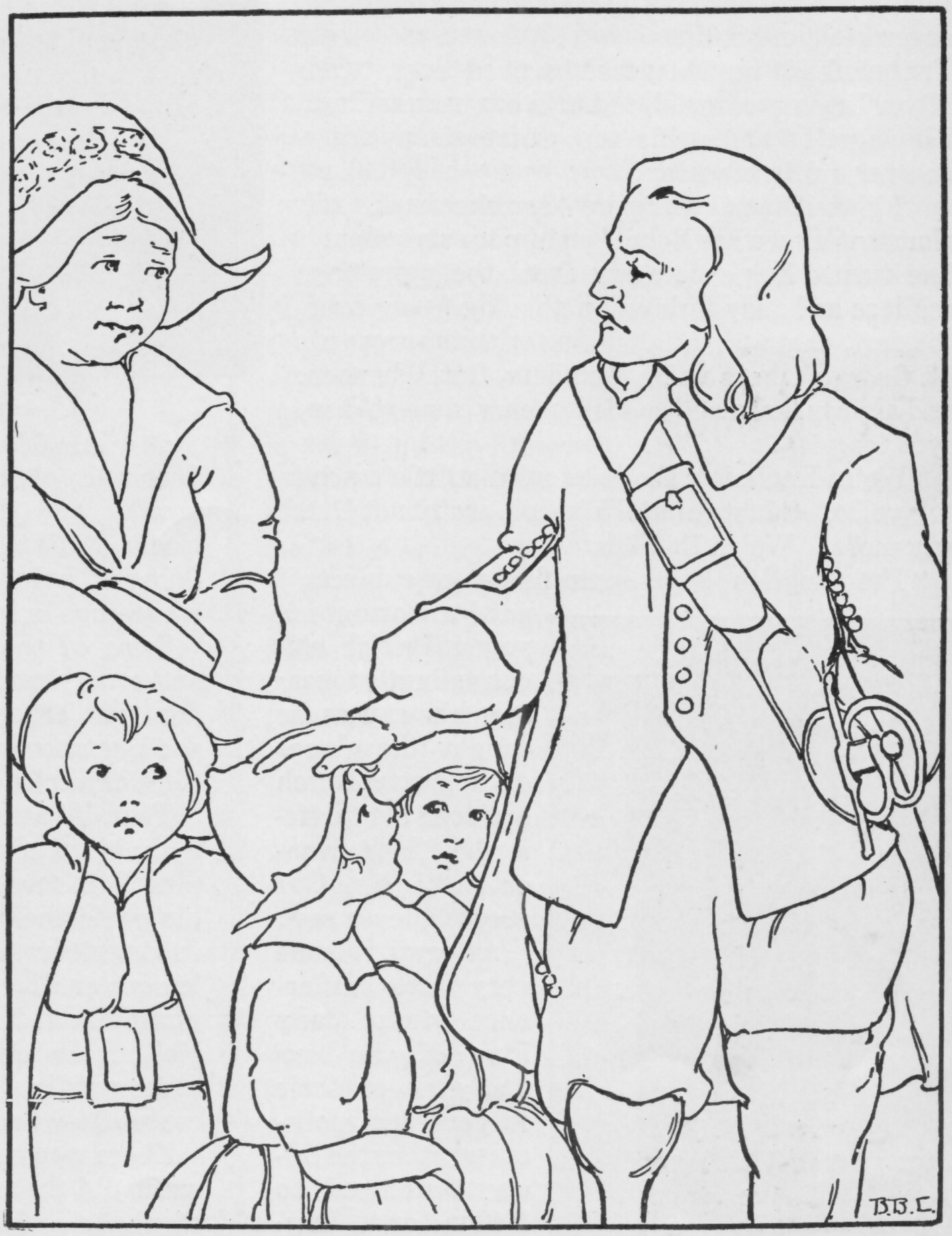
"See our children," cried the New Amsterdam mothers, with tears running down their cheeks. "They are in danger of being killed. We pray you for the sake of these little ones to surrender."

Little Anneke with her round blue eyes and frightened chubby face stood just in front of the governor. He reached down his big knotted hand and absently fingered one of the flaxen ringlets that had escaped from her cap as usual.

"I would rather be carried out dead," said the brave old soldier, who thought it the greatest disgrace in the world to haul down his country's flag.

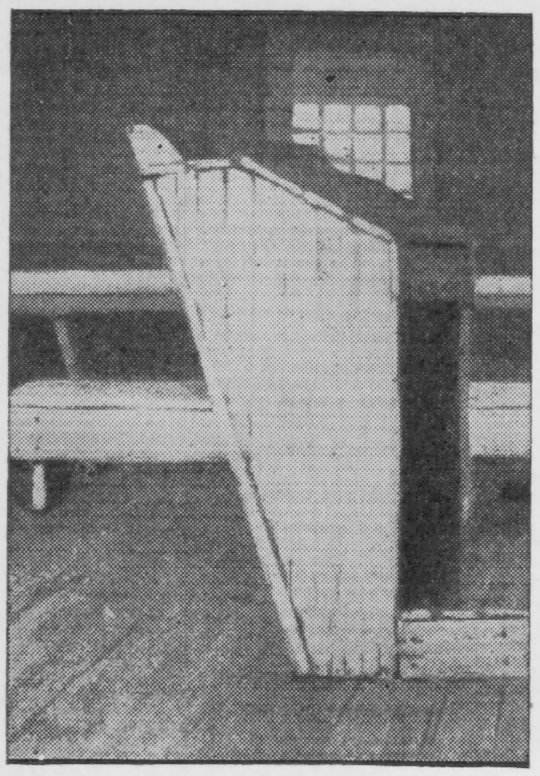
Then the good dominie put his hand on the governor's shoulder. It was noteworthy that neither he nor the children were afraid of Old Silver Leg in spite of his fiery rages. Dominie Megapolensis set forth that New Amsterdam was entirely "encompassed and hemmed in by enemies," that they had not enough soldiers to make it possible to repel an attack and that the whole city had united in signing a petition for surrender.

"I would rather be carried to my grave," said the governor again. Then he looked down at Anneke and the other children.



"Little Anneke with her frightened chubby face stood in front of the governor"

A design to be traced and colored by the little reader.



Master's Desk

"Better that I should suffer than they," he said. "I will surrender the city."

So at eight o'clock the next Monday morning Old Silver Leg stumped out of the fort at the head of his little band of soldiers and led them down to the wharf where they took ship for Holland, for a part of the terms of surrender was that the Dutch soldiers should be carried back to their own country. Heinrich and Anneke and all the other children of the colony were there to see the embarking.

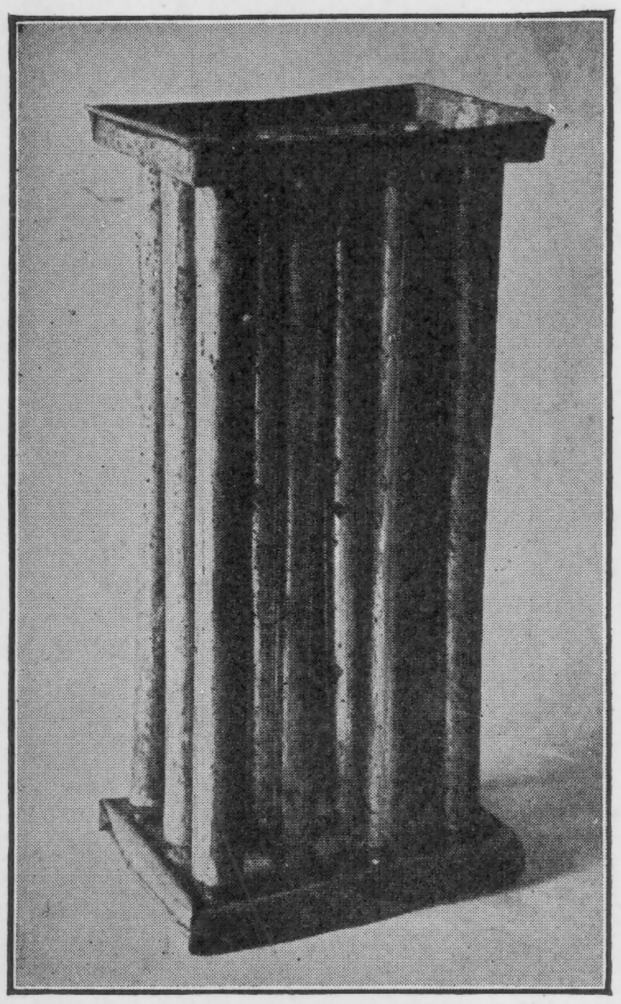
"Hurrah!" cried Heinrich, swinging his cap. But when he saw the old governor's face the cheer died on his lips.

"Anneke," he whispered in awed tones, "Old Silver Leg's eyes are all red. He has been crying. I'll wager he hates this the worst of anything he ever did in his life."

"I hate it too," whispered Anneke back. "I almost wish we had not asked him to surrender." She turned her eyes away from the marching soldiers and they lighted on the flag flying over the fort, that new English flag with the cross of St. George where their own dear Dutch banner had always flown and suddenly tears came to her eyes too.

"We're English," she cried with a little catch in her voice. "Just think, Heinrich, we're not Dutch any more. We're English."

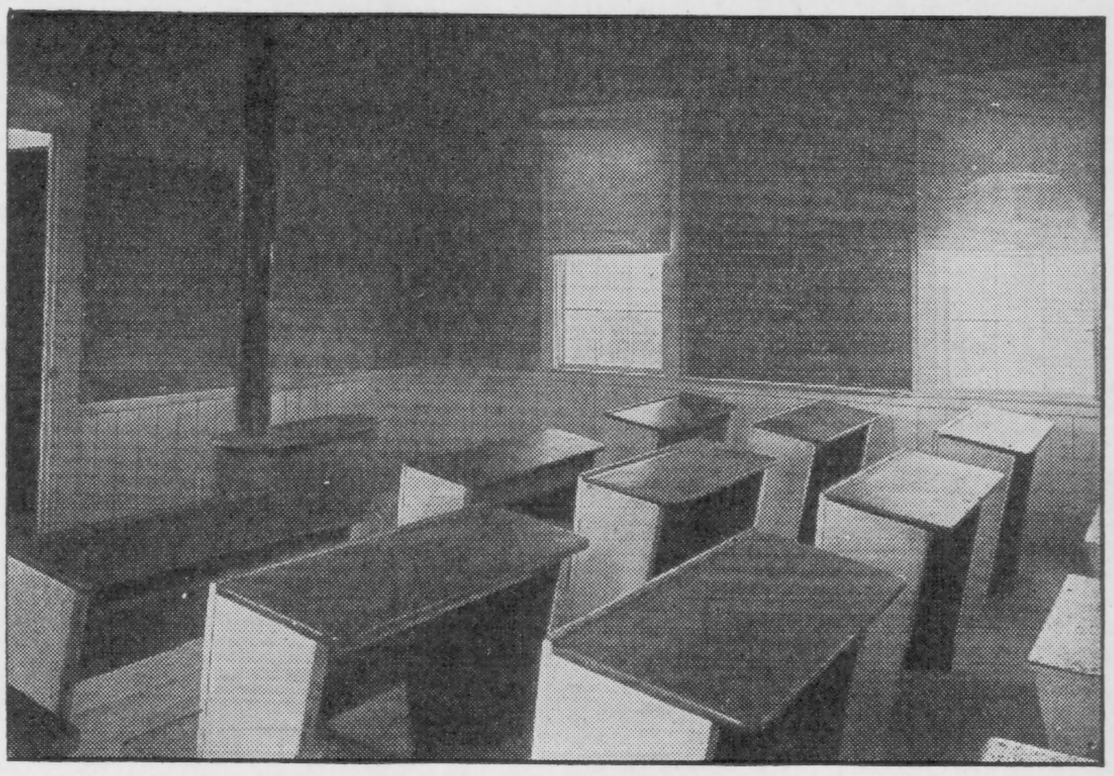
"The English have some fine new subjects," said a handsome young British officer, gallantly touching his cap as he caught the glance of a pretty Dutch maiden. "A thriftier, healthier, cleaner looking set of people I never saw.



Candle Molds

After all, it made very little difference in the daily lives of the boys and girls or their fathers and mothers whether the colony belonged to Holland or to England. They still got up at the sound of the watchman's rattle, and the good housewives scrubbed and scoured and cooked and baked until their houses were, perhaps, the cleanest, and their tables the most amply spread of any in America.

Little Anneke and Heinrich and the rest of the children, wondrously washed and shining, trotted off to school at eight o'clock every morning, including Saturdays. They had lessons in reading and writing and ciphering and the catechism. The schoolhouse was built of logs, and there was no temptation to the pupils to gaze out of the windows when they should be studying, for the windows were made of oiled paper. The seats were hewn logs or boards, each with four pegs put in for legs. Heinrich was rather sorry that their floor was such a fine one, all laid with the split logs called puncheons. In the school where his cousin went the floor was only dirt which many feet ground into powder, and the pupils had lots of fun stirring up clouds of dust. To be sure they were whipped for doing it, but that was nothing. Children expected whippings in school as much as they did lessons.



Old Seats and Desks

Some of the colonial teachers were very harsh and cruel, but the Dutch settlers of New Amsterdam put especially into the contract with their schoolmaster that he should "demean himself patient and friendly toward the children."

That did not mean at all that he should never whip his pupils, but he did a great deal less whipping than most of the teachers of the day. One of his punishments was to have all the children shout out together "Lazy!" to a pupil who missed his lessons or was tardy. For swearing on the schoolground he put a yoke around the swearer's neck. Neither Heinrich nor Anneke had ever had the other pupils shout out "Lazy!" at them and of course they had never had to wear the yoke.

There was only one thing the new English governor did that made any difference to the children of what was once New Amsterdam, and that was when he ordered that the schools should be conducted in English.

"It is right and fair of course, since we belong now to England," said the parents a little sadly. But the children found it a hard rule to obey. They talked Dutch at home and in their play. The only time when they spoke English was in the schoolroom.

The master saw that they would never learn to speak it fluently that way so he made a rule that no Dutch should be spoken on the school grounds, but English only.

The rule was constantly broken. The boys and girls did not like it at all, and some of them did not try to obey. Whenever the master couldn't hear, they would talk Dutch defiantly. Others meant to obey but forgot.

Some teachers would have whipped them all, but Anneke's and Heinrich's schoolmaster was patient and kindly by nature as well as by contract. One day he brought into the schoolroom a round copper

"Would Anneke really get whipped?"

medal with a hole drilled in it and a string passed through.

"This is to help you to remember to talk English," he said. "The first pupil who talks Dutch must wear it around his neck until he catches somebody else breaking the rule. But the one who has it on when school is out shall be whipped."

At first it seemed like a game to them and they rather enjoyed wearing it and passing it on. But when night came they found that it was not a joke. The one who wore the medal when school closed was feruled soundly. The master held that if he threatened a punishment and did not administer a good one he was failing in his duty. The number who wore the medal lessened, and before long Dutch was seldom heard on the schoolground.

Then there came a day when little Neltje, the smallest scholar in school, burst out crying bitterly. In an instant Anneke, who was a real little mother to the smaller children, was by her side.

"What is the matter, Neltje? What are you crying for?" she asked tenderly in the little one's mother tongue.

"She talked Dutch! Anneke talked Dutch!" shouted a mean little scamp who had suffered many times himself for this reason and was glad to see the good girl of the school get into trouble.

"What is the matter, Neltje?"

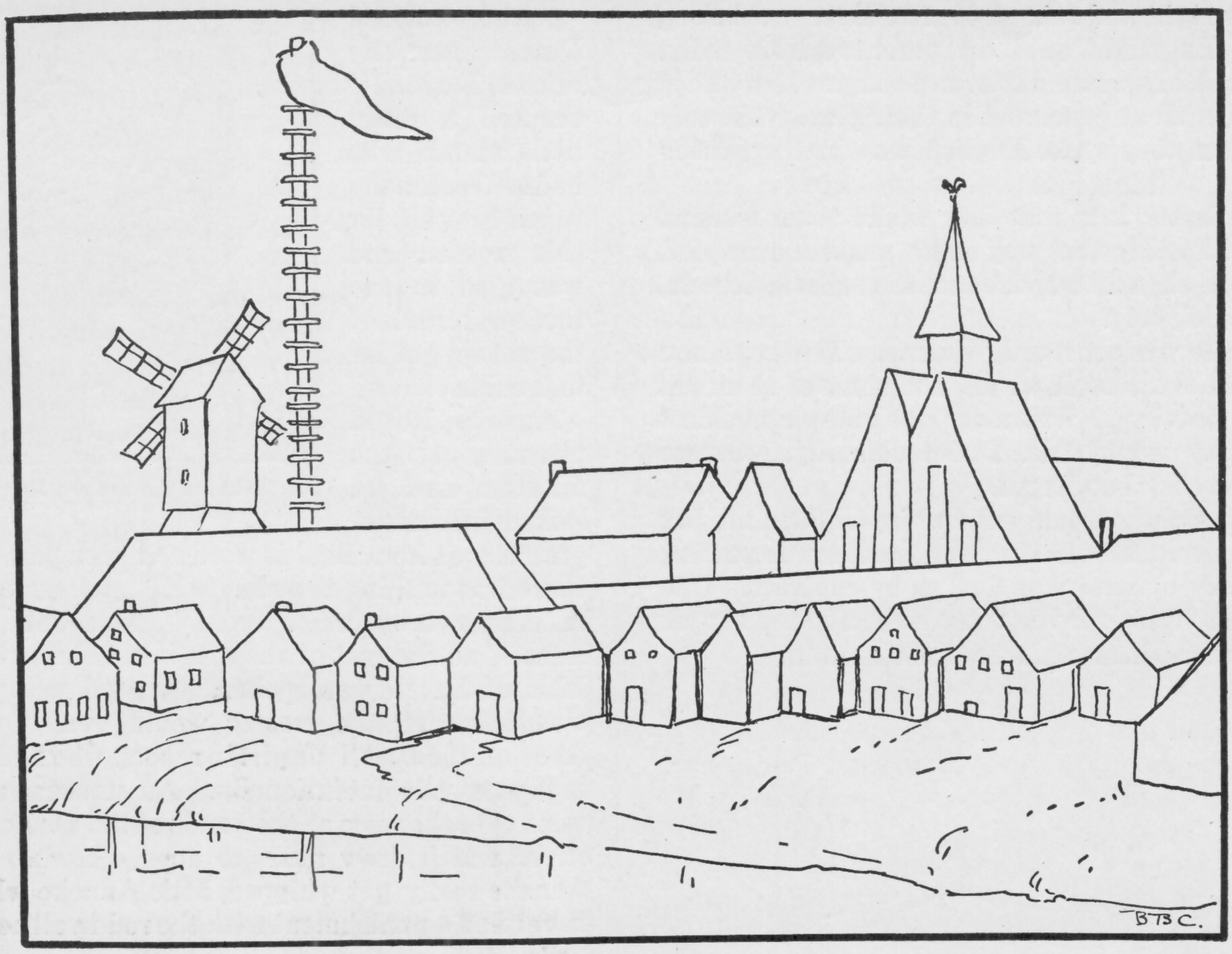
Anneke looked piteously at the master and he looked just as regretfully at her. But his word had been passed and there was nothing to do but to hang the unlucky bit of copper around her neck. Not a soul forgot himself all the rest of the afternoon and not a syllable of Dutch was spoken. A good many were wondering if the master would really punish Anneke, the best little girl in school, who had never broken a rule intentionally. An unusual silence came over the room as the hands of the master's big silver watch drew near to four o'clock. Would Anneke really get whipped, little Anneke who had never had a punishment with the rod in all her good little life?

In truth, the master was as unwilling to give the punishment as any one could be to receive it. He fidgeted about in the chair of office, which was made of a section of log with a board nailed on it for a back, and dreaded to have the moment come as much as did the little girl.

It was two minutes of four when Heinrich raised his hand. He had been doing some thinking and made a resolve.

"Please, master, is it time to let out school?" he said, in the plainest and clearest Dutch. They were the first words that came into his head. It did not matter what he said if only Anneke could be saved from being whipped.

"But Anneke ran up to the old ex-governor"



Old New York

A design to be transferred and colored.

"Yes," snapped the master; and from the tone of his voice you would never have known how relieved he was. He sternly bade the reluctant Anneke give the medal to Heinrich, and as soon as school was out he proceeded to ferule the lad according to his word. But, though he contrived to make the blows sound very terrible, they did not hurt much. Some way Heinrich knew that the master really approved of what he had done. And it was with the utmost friendliness that the two bade each other good-night.

"I suppose you will go to the wharf tonight to see the ship come in from Holland. You had better hasten," said the master.

Most of the settlement was there, for it was still a great event when a ship came from the mother country. Anneke and Heinrich pressed to the front. The first passenger to come down the gangplank was a stout old gentleman with a wooden leg trimmed with silver.

"Mynheer Stuyvesant!" gasped Heinrich, "have you come back?"

QUESTIONS ON "A LITTLE DUTCH BOY AND GIRL OF OLD NEW YORK"

1. Where was New Amsterdam? What is it called now? 2. Do you know who discovered the river on which New Amsterdam is located. 3. Is there any reason for comparing a Dutch girl to a tulip? 4. Why did the English want New Amsterdam? 5. Why did the Dutch have it so badly guarded? 6. Why did Governor Stuyvesant not want to give the people liberties? 7. Did that make them want to fight the English? 8. What sort of man do you think "Old Silver Leg" was? 9. What did the Dutch mothers do? Why? 10. Why did the Governor hate to give up the city? 11. Describe the schoolhouse. 12. How were children punished in the Dutch schools? 13. What sort of man was the English schoolmaster? 14. What was the reason for forbidding the children to speak Dutch? 15. What do you think of the boy who told on Anneke? 16. Was the schoolmaster's plan of the copper medal a good one? Was it right to punish only the one who should have it on when school was out? 17. Why was the master relieved, when Heinrich broke the rule? Why did he not show it? 18. Did he punish Heinrich very hard? Why not? Why were they so friendly after it was all over? 19. Why did Governor Stuyvesant come back to the city he had lost?

But Anneke ran up to the old ex-governor and, reaching up her rosy little Dutch face, bestowed upon him a hearty Dutch kiss.

"We are very glad to see you, Mynheer," she said. And the other children, taking example from her, crowded around him in the heartiest of welcomes. Some way—they hardly knew why—they felt as if it were a beloved grandfather come back to them. And Silver Leg felt so too, and tears that were tears of joy came into his eyes.

"I am glad to be back," he said. "I found that after all I could not be happy away from New—New—York."

He made a wry face at the new name but his eyes lit up with a wondrous smile as he gazed at the flat little earthen fort with its windmill and high flagstaff, the double-roof church with its square tower, and the rows of little houses hugging the fort so closely that it was little wonder that the citizens feared to have the English guns fired at it.

"I found that I loved the new world best," he said brokenly. "It called me back. I will settle on my own farm, the *Bouwerij*, and there will I end my days."

And so brave old ex-governor Silver Leg returned and settled down like any other Dutch farmer on the land granted him by the government, and so it is that perhaps the most famous of all the New York City streets is called after his estate, the Bowery.

Four Little Quakers of Old Pennsylvania

The religious sect commonly called Quakers had its origin in England about the middle of the 17th century, and was largely the result of the ministry of George Fox, who is called its founder. Fox began his public preaching in 1648, and his followers increased rapidly. They were known as "Children of Light," "Children of Truth," "The Friends of Truth," finally adopting the name "Religious Society of Friends." They were the object of almost continual persecutions in England. These persecutions were upon various pretexts, as the refusal to pay church tithes, to take legal oaths, to remove the hat in reverence or obeisance; for preaching in public places; as disturbers of public worship; as Sabbath breakers, for traveling to their meetings on that day. This persecution was continued in New England when the first Quakers came there in 1656. Colonies were founded in New Jersey, and in 1680 William Penn secured from Charles II a grant of what is now Pennsylvania. Penn was the son of an English Admiral, holding a fine position in high circles but who suffered estrangement from his family and many imprisonments on account of his conversion and adherence to the Quakers. In 1681 two shiploads of Friends came to the new colony. Penn followed the next year, and in less than three years the colony had a population of 7000. Penn was fair in all his dealings with the Indians, and as long as the influence of the Friends predominated there was no conflict with them.

WAITSTILL knew that something unusual had happened by the look of Abiel's face as he opened the door; but baby Deliverance was just shutting her eyes and it was no time to talk. Father and mother had gone to Monthly Meeting. She was housekeeper and she had much to do. If the baby missed her nap, there would be trouble in the little log cabin by the Delaware.

So she lifted her finger as a sign to Abiel that he must not speak, and went on jogging the wooden cradle with her foot. When baby Deliverance was quite asleep she could steal out to the woodpile and Abiel would be sure to tell her all about it. They were great chums, twelve-year-old Waitstill and fourteen-year-old Abiel. He was a brother to be proud of. Waitstill's heart glowed at the thought of how tall and strong and sensible he was—and how good. Why, he wouldn't do a thing he thought was wrong, no matter if the king and all the royal army tried to force him! Hadn't Squire Hodgkins smitten him sorely, fairly knocking him down in the road, because he refused to take off his hat to him? And Abiel had risen up, put his dusty hat on his head again, and explained quite calmly and respectfully that it was not from lack of honor to the squire that he did not remove his hat in his presence but because he belonged to the Society of

William Penn

Friends, and it was against their principles to uncover to any man. The bluff old squire was well acquainted with William Penn and his religious beliefs, and, moreover, admired grit wherever he saw it. He had actually laughed and clapped his hand on Abiel's shoulder, saying,

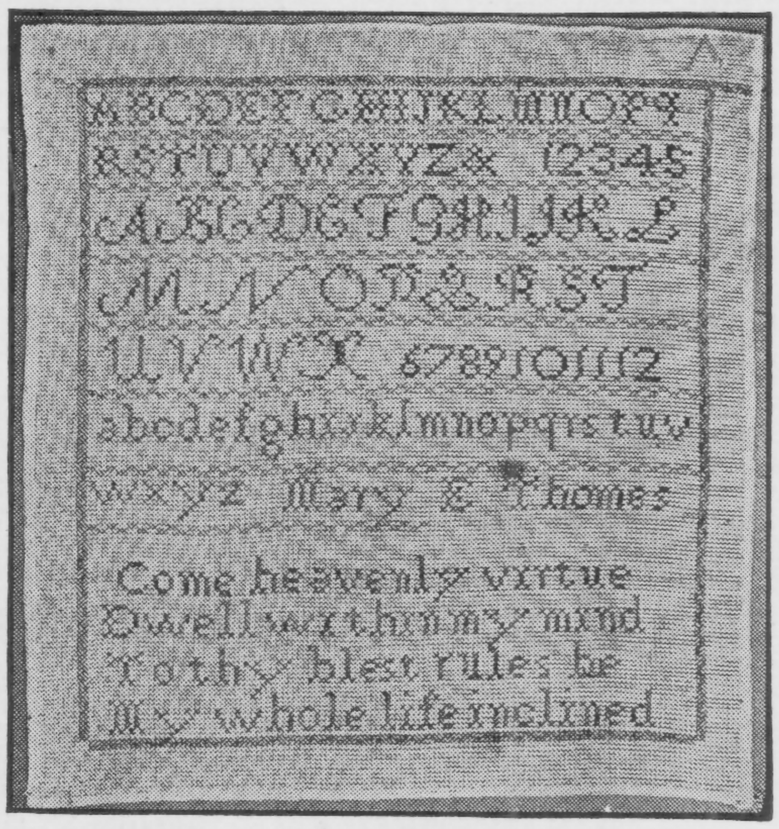
"You're a brave lad, and if ever you get into trouble following that Quaker conscience of yours, I'll be a friend to you."

Little Isaac was sitting very still on the settle. That was strange, but the five-year-old knew as well as anyone how important it was to get the baby to sleep. He was as sharp as tacks, was little Isaac. He had climbed up and taken down the hornbook that hung on a peg on the wall. He had not yet been taught his letters, but he was poring over the crisscross rows as earnestly as if he could read every one of them, the *a b, ab, e b, eb, i b, ib,* and so on below them, and even the Lord's Prayer at the bottom.

It was a precious thing, that hornbook, but Waitstill felt sure that little Isaac would not hurt it. He was a mischief, but he knew too much to damage anything valuable.

As Waitstill rocked the cradle she worked on her sampler. She would have felt that she was lazy if she had not kept her hands busy as well as her feet. Her sampler was already adorned with the alphabet and numberless fancy stitches and designs, including a blue tree and a green horse with red legs. She was working now at the verse.

Waitstill Maxwell is my name
And this Work is mine
My Friends may have
When I am dead and laid in grave
This needlework of mine—

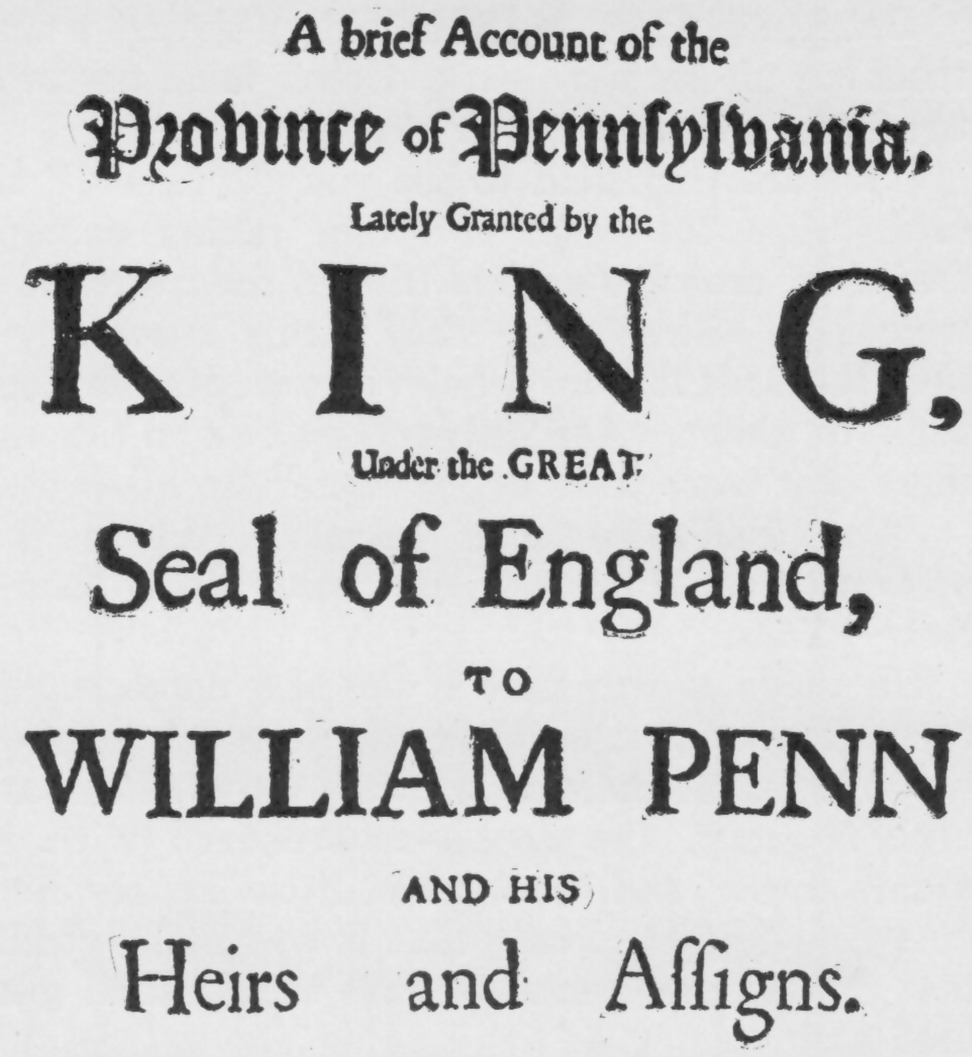


A Sampler

That was as far as she had gone with her colored crewels. As she took the last stitch in the "e" it came to her that Abiel had not gone out to the wood-chopping as she expected. He was tiptoeing around the shelves that held food and dishes. He went to the chest now and took out a coarse linen towel. In this he wrapped a loaf of rye bread and a great piece of the roasted venison that was on the pewter platter.

"Abiel, what is thee doing?" cried Waitstill in

"They are for a starving man"



A brief Account of the
Province of Pennsylvania,
Lately Granted by the
KING,
Under the GREAT
Seal of England,
TO
WILLIAM PENN
AND HIS
Heirs and Assigns.

Since (by the good Providence of *God*, and the Favour of the *King*) a Country in *America* is fallen to my Lot, I thought it not less my Duty, then my Honest Interest, to give some publick notice of it to the World, that those of our own or other Nations, that are inclin'd to Transport Themselves or Families beyond the Seas, may find another Country added to their Choice; that if they shall happen to like the Place, Conditions, and Government, (so far as the present Infancy of things will allow us any prospect) they may, if they please, fix with me in the Province, hereafter described.

I. *The* KING'S *Title to this Country before he granted it.*

It is the *Jus Gentium*, or Law of Nations, that what ever Waste, or unculted Country, is the Discovery of any Prince, it is the right of that Prince that was at the Charge of the Discovery: Now this *Province* is a Member of that part of *America*, which the King of *Englands* Ancestors have been at the Charge of Discovering, and which they and he have taken great care to preserve and Improve.

II. William

Title Page of Old Book

surprise. She was so surprised that she forgot all about the danger of waking Deliverance, but luckily the blue eyes were tight shut by this time, and the baby was a sound sleeper when she was fairly off.

"Abiel, what is thee doing? Thee can't take those things. They are all we have to last over First Day."

"They are for a starving man, sis. We can get along with a little less for we are not starving. I am sure father and mother would say to take them."

"Abiel, what does thee mean? Who is starving? No one of our people, surely. Where has thee been to find a starving man?"

"In the Big Woods," answered Abiel shortly. Waitstill clasped her hands in sudden terror.

"Oh, Abiel, how could thee go there? Father says the Big Woods are not safe for a man to go in alone, and thee is but a boy. There are so many wolves and bears and all kinds of dangers. Abiel, what did thee go for?"

"It was a leading," answered Abiel. "I felt an impulse of the Inner Light that said, 'Go into the Big Woods and search.' And I obeyed, and found there an Indian who was hurt so that he cannot

"I made him a sort of shelter"

walk. He cannot get food for himself, and so I must take it to him. I must not stop to talk any more, sister. I must hasten to him."

"Is he terribly hurt, Abiel? Is he going to die?"

"No, not if he gets food. He has no hurts that will not heal. I made him a sort of shelter in the rocks, and he thinks some of his tribe will come looking for him soon, but he is very weak and faint and he must have food or he will die. I must not delay, Waitstill. I must go at once."

"Oh, I can't bear to have thee go again into those dreadful woods! Can't thee wait till father comes back so that he will go with thee?"

"Father will not start back, thee knows, until First Day is over. That would be too late."

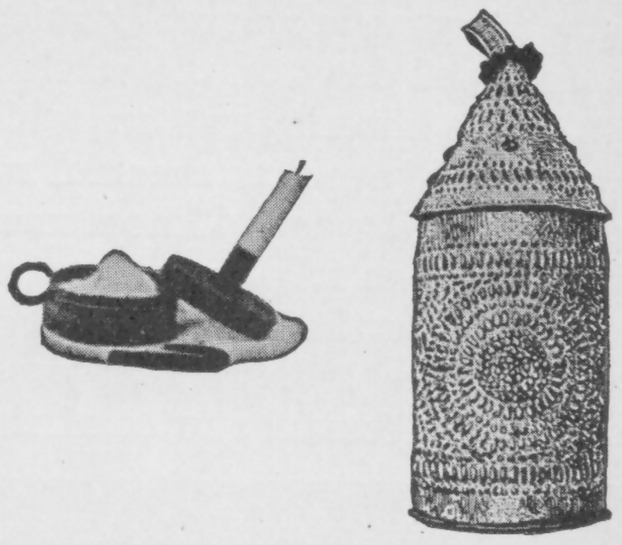
"Oh, I don't believe father would let thee go! He has said often that it is not safe. Suppose a bear should get thee, or a panther should spring on thee! Don't go, Abiel! It is but a red man, a savage."

"The red men are our brothers," answered Abiel in stern reproof. Then, melted by her tears, he added: "I am sure father would say to go wherever I could help a brother, were it a red brother or a white one. It is always a duty to help. I must go."

He pulled himself gently away from the clinging hands. "Don't be troubled, sister. No real harm can come to one who is doing right."

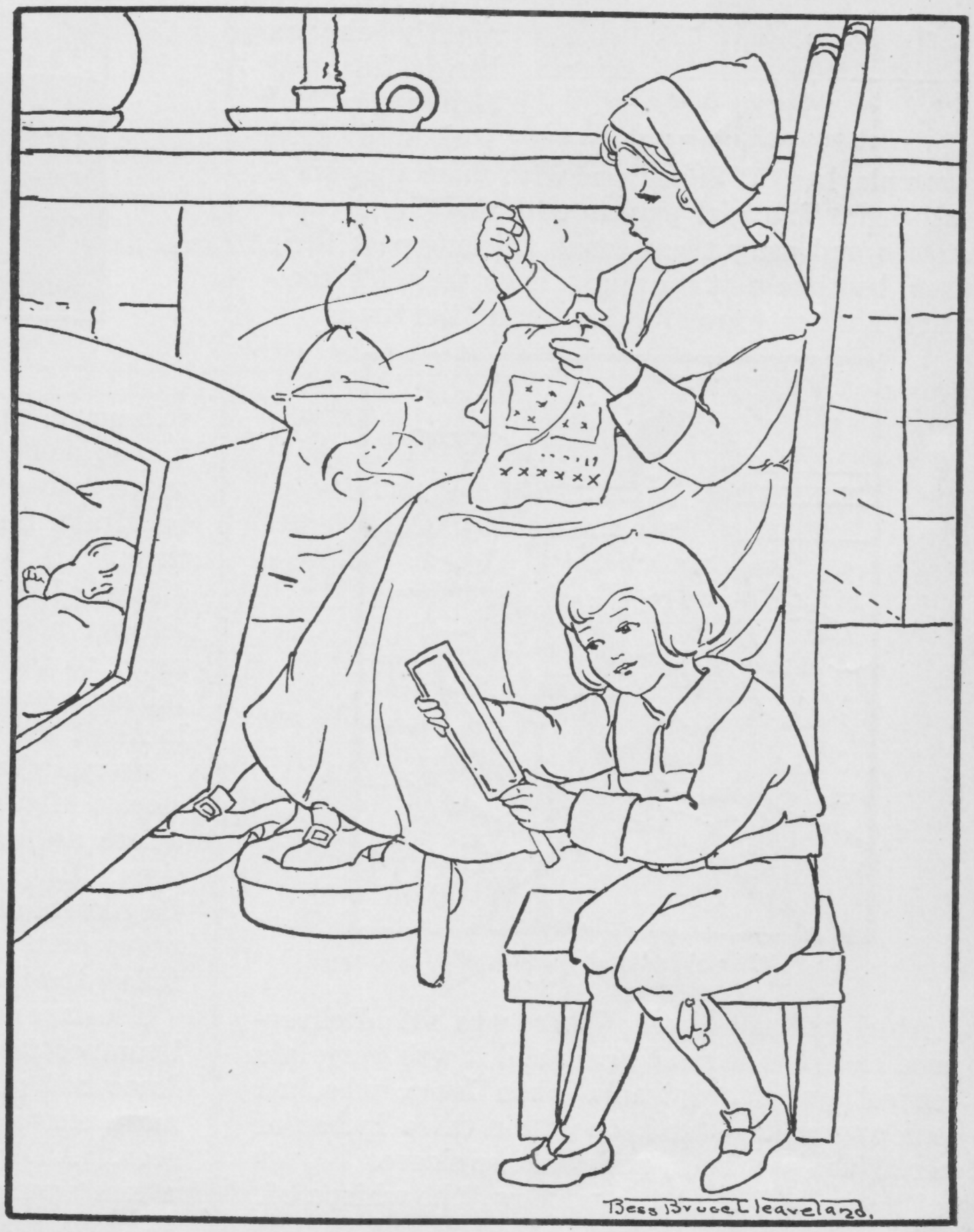
Waitstill felt as if she had to let him go then, but her heart was heavy as she went back to her work.

"Much harm has come to those of our faith who were doing right—or who thought they were," thought the young Quaker maid sadly. Quakers had been whipped and imprisoned and mutilated, and even hung, for following what they believed as set to them as duty by that Inner Light. Waitstill admired the courage of these dauntless coreligionists, but even her devout father had said that some of them had shown zeal not according to knowledge. Wasn't that what Abiel was doing now? To go into the terrible forest, a boy alone!



Colonial Candle-stick and Lantern

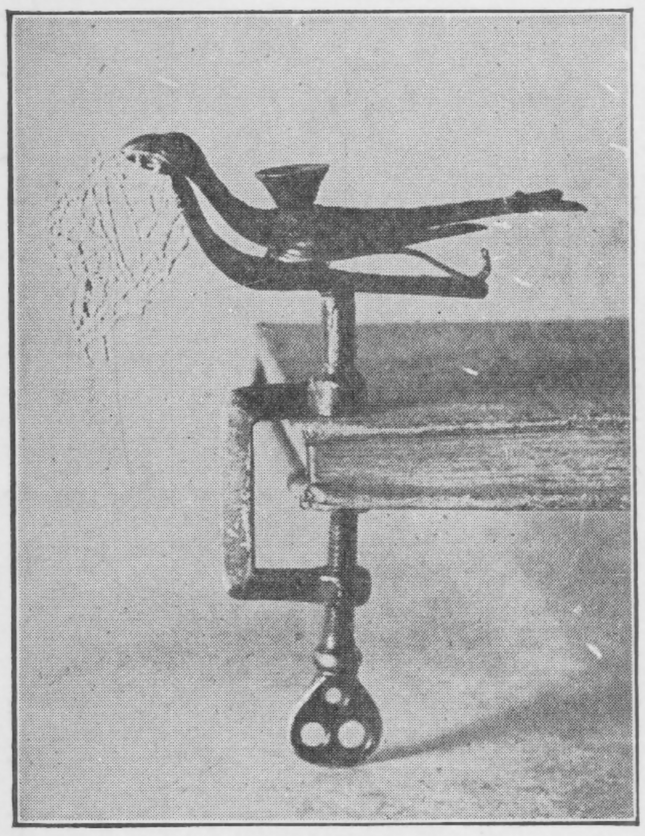
Deliverance slept a long time. Long before she waked Waitstill had begun vibrating to and fro between the window and her household tasks, hoping, though she knew it was too early to be possible, to see Abiel coming back. The tiny log cabin in the clearing was oppressively still. Little Isaac, as he was apt to do when it ever happened that



Waitstill, Isaac and Baby Deliverance

Little readers will enjoy copying this design, or tracing it, and coloring it.

something made him really quiet for a few minutes, had slipped down on the settle and gone to sleep too. The lowering sun crept higher and higher on the wall till even its cheerful mark grew terrible to her, for it was red like a smear of blood. Every sound outside frightened her. Was that the hoot of an owl or the warcry of an Indian? An owl, surely. The Indians kept peace with Penn's followers, but fearful stories of their massacres had drifted down from the New England colonies. Why did not Abiel come back?



Sewing Bird

A device to hold the cloth when sewing by hand.

The terrifying red rays faded, and darkness still more terrifying took their place. Waitstill had done such evening work as there was to do and Abiel's nightly chores beside. Isaac and Deliverance had wakened and were playing. If Sister was with them they were satisfied. The girl played with them, told them stories and sang them songs till long past their usual bedtime that she might have them for company, her heart growing heavier all the time.

"The girl played with them"

Abiel had not come. Where was he? Deliverance had gone to sleep again and it was very late for colonial Pennsylvania when Isaac, who had someway managed to keep within three inches of her all the past hour, pulled at her sleeve.

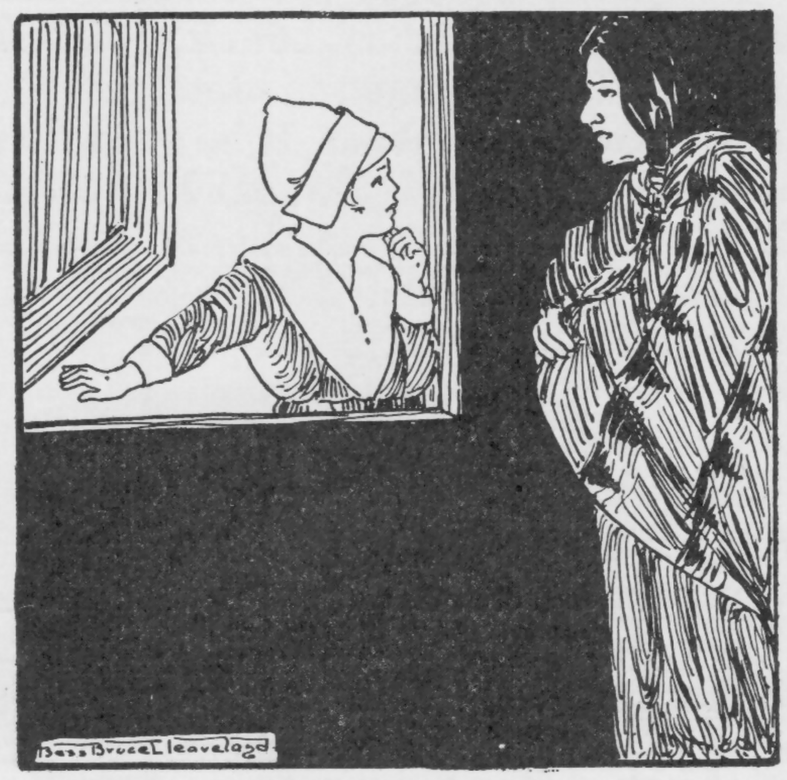
"I saw a face at the window," he whispered. "It was an Indian's face--all dark, and he had feathers in his hair."

Waitstill caught her breath in terror. Then she remembered the treaty Penn had made with the Indians, to be kept "as long as the water should run in the river and the sun shine in the sky." She ought not to fear them.

She stepped to the barred door and threw open the upper half.

"Who is it?" she called, and her voice was steady though her heart was quaking.

It proved, like everything else in her life, to be not half so bad as she had feared. In broken English the Indian explained that he belonged to the same tribe as the wounded man in the woods, that they had found him and Abiel who was ministering to him, and, partly because the boy was almost exhausted with his double journey, and partly because they wished to celebrate his kindness to their



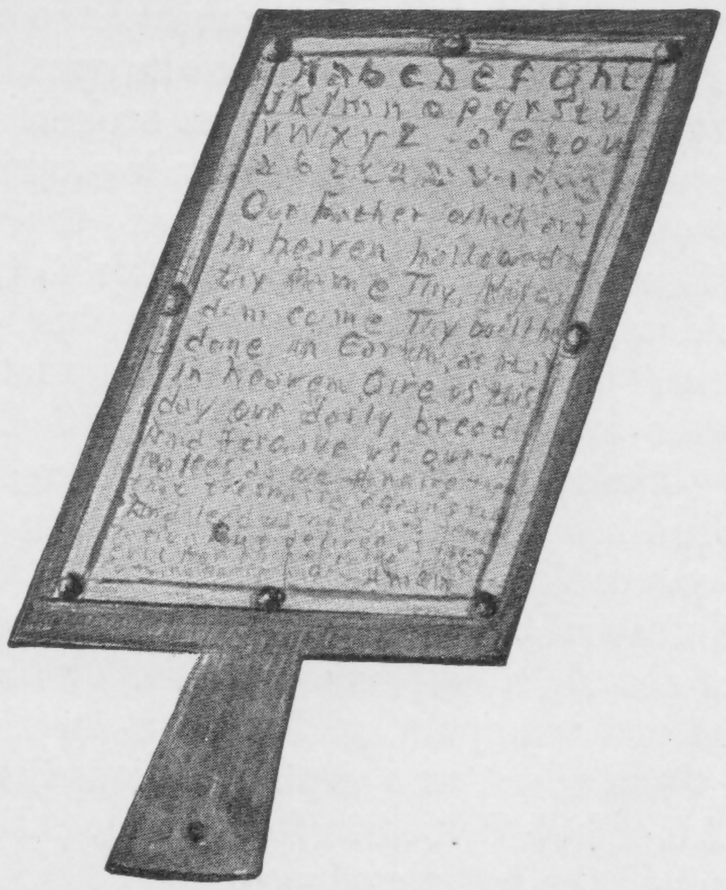
"'Who is it?' she called"

tribesman, they had taken him with them to their village along with the wounded man. This messenger had come to tell Waitstill and to bid her not be afraid, for he himself would stay and protect them.

It was like Abiel to think to send the Indian to tell her not to worry, and it was like him, too, never to think that she might be scared by an Indian messenger. Truly all men were brothers to Abiel. He was a true follower of William Penn.

He came back blithe as a lark with all sorts of stories of what he had seen in the Indian village, where he had been feasted and had had a fine time. His father and mother looked grave when they heard of his expedition but they did not reprove him. It was the duty of every Quaker to follow the Inner Light wherever it led him.

The days went by and summer came. Baby Deliverance trotted about on toddling feet. Little Isaac had grown, too, and he was certainly the most active child the Quaker household had ever seen. All day long he climbed and jumped. Not a tree was so tall but he might appear like a bird swaying in its topmost branches. There was no school where he could go, but his mother gave him



Hornbook

lessons and he learned with astonishing quickness. Already he knew every letter, syllable and word on the hornbook and could read the rhymes in the primer from—

> "In Adam's fall
> We sinned all,"

to—

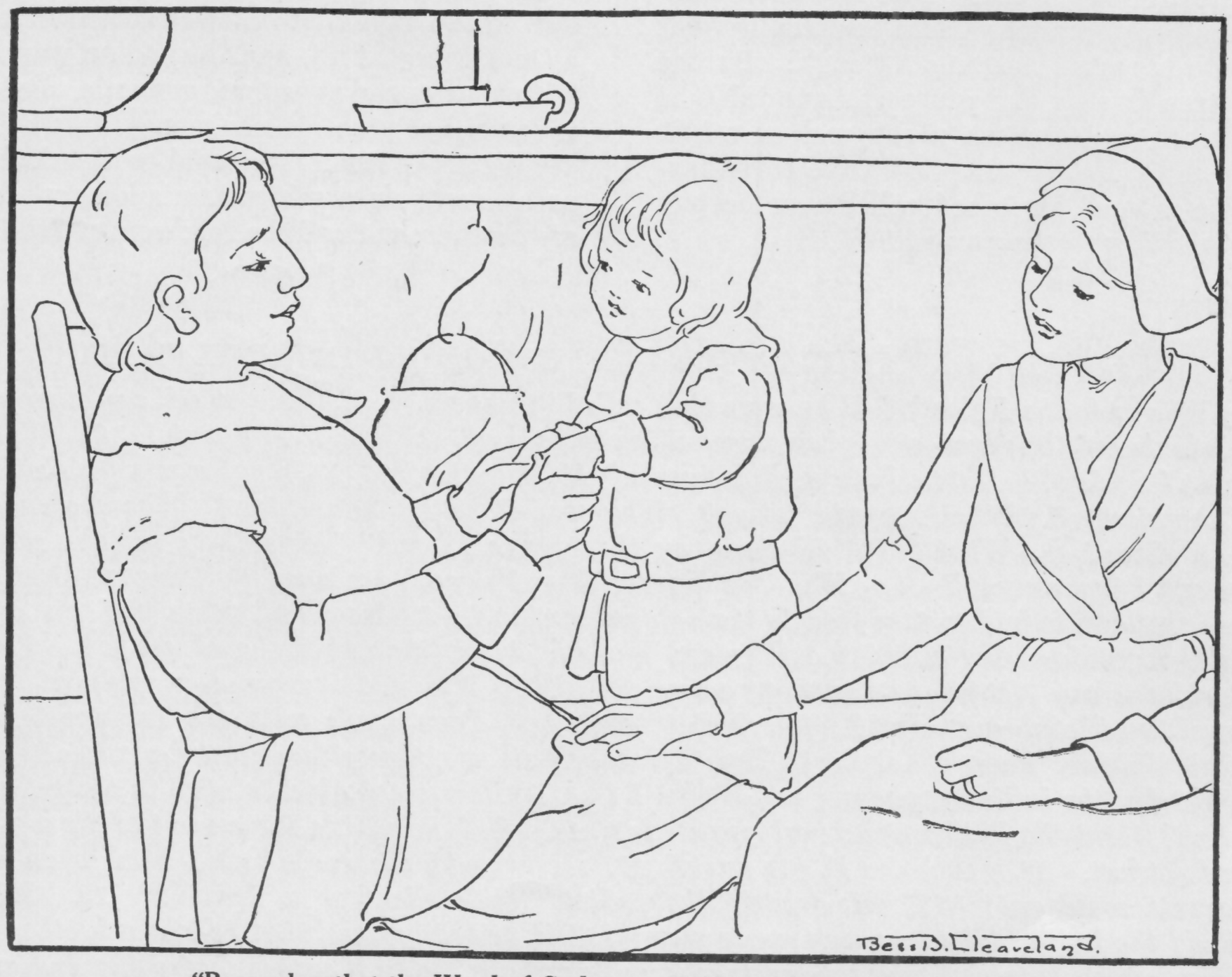
> "Zac-che-us, he,
> Did climb the tree,
> Our Lord to see."

He had many thoughts, too, in that little round head of his, and nothing that his elders said escaped his notice. He listened more than anybody dreamed to everything that was said about that Inner Light. His father and the other Quakers maintained that there was a voice of God in the soul to direct every man. They believed it was a duty to do just what that "Inner Light" led them to do. Some of the things the Quakers did were foolish and even shocking, though they were good men and women and meant to teach deep lessons by their strange actions.

Little Isaac had listened to Abiel's experiences with breathless interest and he wanted above all things to see the Big Woods and the Indian village for himself. Wishing to go so very much, he easily persuaded himself that he heard a voice in his soul directing him to go. Who knew but there might be another wounded Indian whom he might save?

With two slices of rye bread that he had managed to secrete in his pocket for provision, he started away. His sturdy five-year-old legs carried him far away before he was missed. His bare feet left no trace on the dry ground. On and on he went until he did indeed reach the very heart of the dangerous Big Woods and was as thoroughly lost as any youngster ever was in the world.

He did not mind while the daylight lasted. He ate his bread and lay down in the delicious cool shade and slept for hours as soundly as if he had been at home. When he woke, the long summer day was over and twilight falling awesomely in the woods. Then fear fell on his heart.



"Remember that the Word of God says, 'Children, obey your parents'"

Trace the picture, transfer to water color paper, and color.

"Mother! Waitstill!" he cried, but mother and Waitstill were miles away. He ran frantically this way and that. He tried in vain to retrace his steps. All the while the dark was dropping down or rising up and enveloping the woods. Now was the time to think of bears and wolves. Little Isaac wished he had thought of them before he started. A tale

"'Oh, is he dead?' cried Abiel"

of a visitor in the cabin of being set upon by a pack of wolves, came fearfully to his mind. This man had climbed a tree and sat all night above the hungry pack. He would climb a tree before the wolves came. Trees were easy for Isaac to climb.

He shinned up the nearest, and stretched himself out on a broad branch. Here he actually went to sleep with his arms clasping a bough. But he was not a tree-dweller and was certain to fall. If he had fallen from it in the night, wolves might have eaten him, but it was not till the early daylight that he yawned, stretched, rolled over sleepily and went crashing to the ground.

He was not hurt as much as might have been expected for he had fallen limp, but he was bruised from head to foot and one leg was broken.

There was trouble enough in the log cabin when he was missed. The members of the family hunted in every place they could think of, but in vain. All night long they were out crying, calling, searching. The news spread from one household to another and all the settlement joined in the search. Their worst fears were confirmed when they found his little cloth cap in the Big Woods. But no one could track him there.

As Abiel and his father stood, despairing, after hours of search, a half-naked figure, adorned with feathers and wampum, glided between the trees toward them, silent as a dream. It was the Indian whom Abiel had helped in the winter. The news had reached the Indian village.

"Papoose lost? I find him. He go this way."

He strode away with astonishing swiftness, following traces a white man's eye would never see. The searchers followed with mingled hope and despair until, just as the sun was setting once more, he led them to the pitiful little heap beneath the tree.

"Oh, is he dead?" cried Abiel, but the Indian looked up reassuringly.

"Not dead. Just hurt. Like me last winter. He be all right by and by."

He showed them how to make a litter of branches and they carried the little boy home to his mother. He was kissed and cried over and tended and petted during the days that followed as if he had not been a Quaker boy at all, and the Indian was showered with thanks and attempted rewards. But he would take neither presents nor money.

"We are brothers," he said, with a look at Abiel as eloquent as a white man's long speech. "We are brothers with all the followers of William Penn.

QUESTIONS ON "FOUR LITTLE QUAKERS OF OLD PENNSYLVANIA"

1. Who were the Friends? Why were they called "Quakers?" 2. Can you tell any other peculiar belief they had besides being unwilling to take off the hat to any man? 3. What was a "Squire?" Did he have much influence? Much authority? 4. What was a hornbook? A sampler? 5. What is pewter ware? Why was it better than china? Was it cheaper than silver? 6. What did Abiel mean by the "Inner Light?" Was it the same as what we call "Conscience?" 7. Was it a part of the Friends' training that made Abiel so positive that he had to take food to the injured Indian? 8. How had Penn and his colonists treated the Indians? 9. Why did Waitstill insist that Abiel should not go? Was it right to say, "It is but a red man, a savage?" 10. Why had Quakers been whipped and imprisoned and mutilated? 11. What treaty had Penn made with the Indians? 12. Was William Penn a Quaker? How did the State of Pennsylvania get its name? 13. What did the Indian messenger tell Waitstill? 14. How was Abiel treated in the Indian camp? Did the Indian show real gratitude? 16. Tell how little Isaac went to the woods and got lost. 16. How did he get hurt? 17. How could the Indian find him when his parents could not? 18. How could the Indian "glide silent as a dream?" 19. Why would the Indian take no presents nor money? Did he really mean that he was a brother to Abiel? 20. Is this story a true picture of Indian character? If so, why were the Indians always at war with the white men?

Brothers help each other." And empty-handed he strode away through the forest.

"Isaac," said his mother reproachfully when he had been at home long enough and was sufficiently convalescent for even an anxious mother to be rid of the terrible fear that he was dead or going to die, "Isaac, what did thee go into the Big Woods for? Didn't thee know it was naughty and dangerous? Why did thee do it?" Little Isaac didn't like to be scolded. His chin quivered pathetically.

"It was the Inner Light, mother," said the five-year-old Quaker. "It was a-leading. I heard a voice in my heart that said, 'Go into the Big Woods.'"

"He needs a whipping," said the neighbor who heard it, although she too was a Quaker. "Just think of the trouble he has made thee!"

But his father took the small hand and clasped it tightly in his own. It was such a little hand and he was such a little boy.

"My son," he said, and then his voice broke curiously as if he were half laughing and half crying, "my son, don't thee ever attempt to follow the Inner Light again until thee is quite grown up, without coming to me and telling me about it. Remember that the Word of God says, 'Children, obey your parents.'"

In the Days of Daniel Boone

In 1751, the Virginia Company gave a land company 800,000 acres west of the Alleghanies, for settlement. Dr. Thomas Walker was sent out to survey a road. He went from North Carolina through the Cumberland Gap, to the site of the present town of Barbourville, Ky. In 1769 Daniel Boone, a Scotch Irish pioneer, following the same route, founded Boonesboro, near Lexington, on the Kentucky River. Many settlers followed, the country filled up rapidly, and the colonies of Wautaga (Tennessee) and Transylvania (Kentucky) were founded.

JULY 17, 1776! The first memorable Fourth of July was only a little while past. The Liberty Bell had scarcely finished its joyous swinging in token that the Declaration of Independence had been signed. But three girls who sat on the bank of the Kentucky River, dipping their bare brown feet in its cooling waters, had never heard of the Declaration of Independence.

Nevertheless, they were true American girls, loyal and patriotic. In the year 1776 it took many months to bring news through the forests and over the mountains to the wilds of far Kentucky. The Kentucky settlers really did not know yet that war had been declared, or that the British were stirring up the Indians to attack them.

"I can guess what Betsey is thinking of," teased fourteen-year-old Jemima Boone. "She is thinking of Samuel Henderson, and wondering whether he will bring in a deer or a bear from the hunting."

"No, I'm not," answered Betsey, tossing her head. But she was, though, for the young hunter had looked very handsome when he started away with his gun over his shoulder; and his last look had been for her. Betsey was only sixteen, but in those days there were so few girls that they had to grow up fast. Shyly she snatched at the first thing she could think of to turn the conversation.

"I'm thinking about last Christmas," she said. "Oh, ho! How funny it seems now to think of last Christmas!"

The July sun beat down upon their heads. The comfortable log cabins of the stockade were only a little way out of sight. They had just eaten a dinner of corn pone and wild honey with venison, fresh green beans, cold turkey, baked squash, and

Daniel Boone

raspberry pie. It seemed very strange to think back to the time when they had been half frozen and half starved, footsore and weary, and utterly miserable. Yet it was only six months before that Betsey and Fanny had arrived in Kentucky with a pioneer caravan, on the very eve of Christmas.

How good the little log cabin had looked with its roughly constructed fireplace that promised warmth, and the four walls that promised shelter. How good the parched corn and dried buffalo meat tasted, which was all their welcoming friends had to offer them.

The journey westward across the mountains through Cumberland Gap and through the untrodden forest beyond had been so hard that even in the hot July sunshine the girls shivered to remember it. On foot they had made it, and often their feet were torn and bleeding. Ahead of them and behind them the men walked with guns on their shoulders, always watching, always listen-

Boone's Wilderness Trail

ing; other caravans had been massacred by the Indians, every man, woman and child. They had not been able to go as fast as they had wanted to, and a bitter cold winter had overtaken them. They could go only two or three miles in a day and then camp in the snow. Oh, it was hard, very hard.

"Don't think about it," said Jemima. "Let's go canoeing!"

The log dugout that the men used in crossing the stream was drawn up on the shore. The river was swift and not safe, but the pioneers, young and old, were reckless of danger.

"Come on, girls," called Daniel Boone's daughter, pushing the canoe down toward the water. The two Calloway girls were quite ready to fol-

"Three girls sat on the bank of the Kentucky River"

low her lead. They all got into the canoe, sitting flat on the bottom, and Betsey began to paddle.

The day was perfect. The trees bending over the water shaded them. Wild grape vines clambering over the trees made a marvelous tangle. They were joking and singing and chattering, as happy as girls could be. They fairly shook with laughter at Jemima's sallies.

"Don't be so funny, Jemima," gasped Fanny at last. "I'm afraid the canoe will tip over."

Then Jemima tried to sober down, for she knew the danger of that. But as all girls know, the harder you try to keep from laughing the harder it is to stop. Somehow, in the midst of their mirth the paddle slipped from her hand and floated down the current.

"There! See what you've done!" cried Betsey in consternation. "How are we going to get to shore?"

But Jemima refused to be alarmed.

"We'll float over to the north side," she declared calmly. "The current will take us right to the shore. And then we'll all shout together and the folks will hear us and come after us.

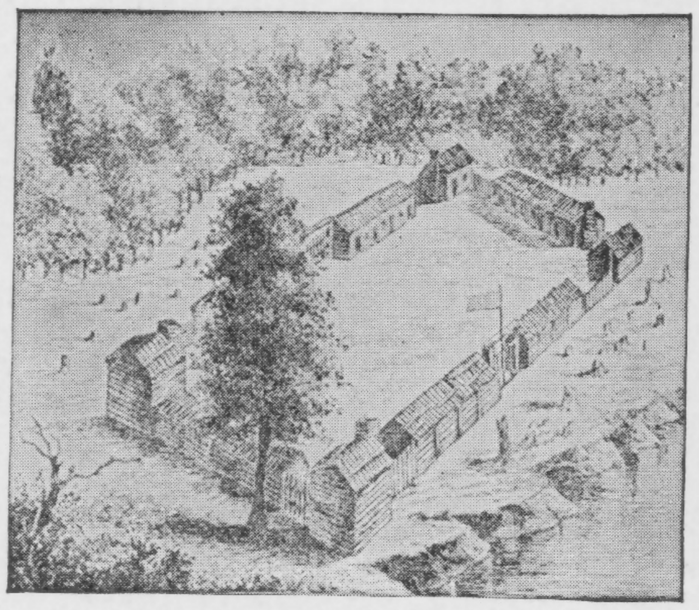
"A brown body was creeping toward the river"

Samuel Henderson will swim over, I know, if it is necessary."

Then the two Calloway girls calmed their fright and began to tease Jemima for her awkwardness in losing the paddle. They didn't often have a chance, for Jemima was as surehanded as surefooted.

"Look!" cried Betsey suddenly when they had floated almost over to the other side. "What is coming out from behind that bush?"

Sinuous and lithe, a brown body was creeping toward the river. It was an Indian in war paint, and from behind other bushes came four more.



The Stockade at Boonesboro

At first the girls were hardly frightened for they thought there was peace between the colonists and the Indians. But when the five Shawnees waded out into the water, dragged them from the canoe by force, and carried them ashore, they began to scream with all the strength of their healthy young pioneer lungs.

Their screams were soon choked off by their captors, but not before the sounds had reached the little settlement. But all the men had gone

"'Look!' she cried. 'Look! On that tree!'"

hunting and the only canoe was the one across the river. Before the men got home and could start after them, the three girls and their captors were far on their way to the Shawnee town on the Ohio.

Betsey and Fanny looked piteously at Jemima, and Jemima looked at them. This was all they could do, for their mouths were gagged. They knew well enough that they had to go where their captors led them. Otherwise the tomahawks that were in the red men's belts would be red with blood. Yet somehow, as if by accident, Jemima contrived to stumble against a bush once in a while and break a branch. When her hands were freed, they furtively sought her skirt and tore it. When the Shawnees were not observing, she managed to drop a bit of the torn skirt on the ground.

Betsey and Fanny were quick to see. Somehow, their skirts got torn too, and little bits were left to mark the pathway; and, whenever possible, they broke a twig to show which way they had gone. But they had to do this very cautiously, for the Indians were sharp-eyed. Over rocks and ravines, through briars and thickets, those tireless brown savages led the three girls, without stopping for anything. If they stumbled, they were jerked up and on. If their bare feet bled, it was no matter. On and on, hour after hour, while the sun wheeled over to the west until his dying rays lit the under sides of the leaves as with fire. Then darkness put out the fires of the sunset and turned the woods black. Still the weary captives were dragged on. It seemed uncounted ages before the gags were removed and the girls were allowed to sit down on the ground, and a little bit of dried and pounded meat called pemmican was given them to eat.

The three girls slept in a huddled little heap at the foot of a tree, with a surly Indian keeping guard over them. No chance to steal away in the night or to say anything that should not be overheard. When Betsey awoke in the morning she clutched Jemima's arm convulsively.

"Look!" she cried. "Look! On that tree!" And Jemima looked, and for the first time broke into sobs.

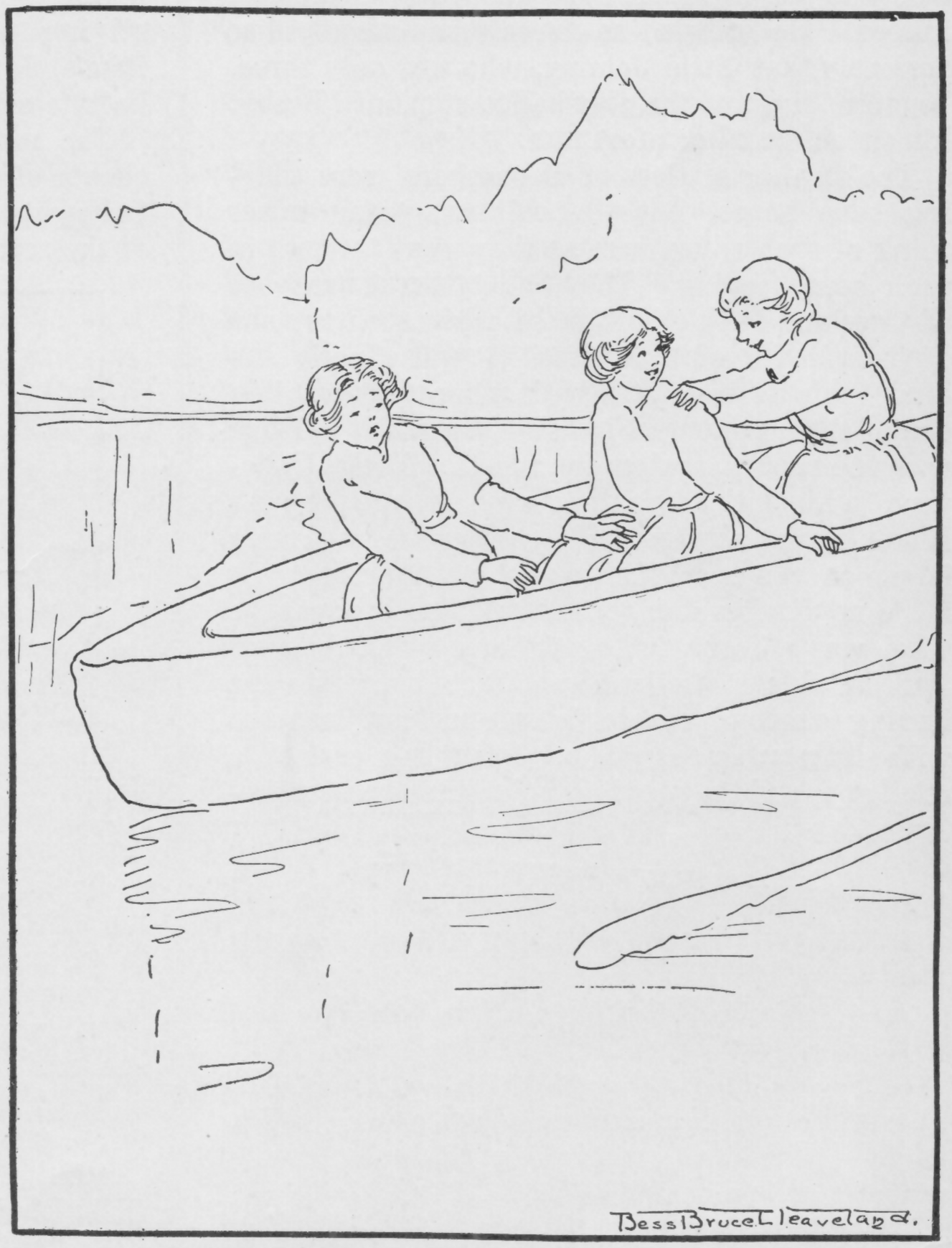
High up over their heads rose a giant of the forest. Rudely carved on its trunk was a legend that Jemima had many times seen, for her father had a fancy for cutting his name and hunting feats upon trees.

"D Boon cilled A Bar on this tree, year 1770."

For a few minutes they all cried together. Then Jemima choked back the sobs.

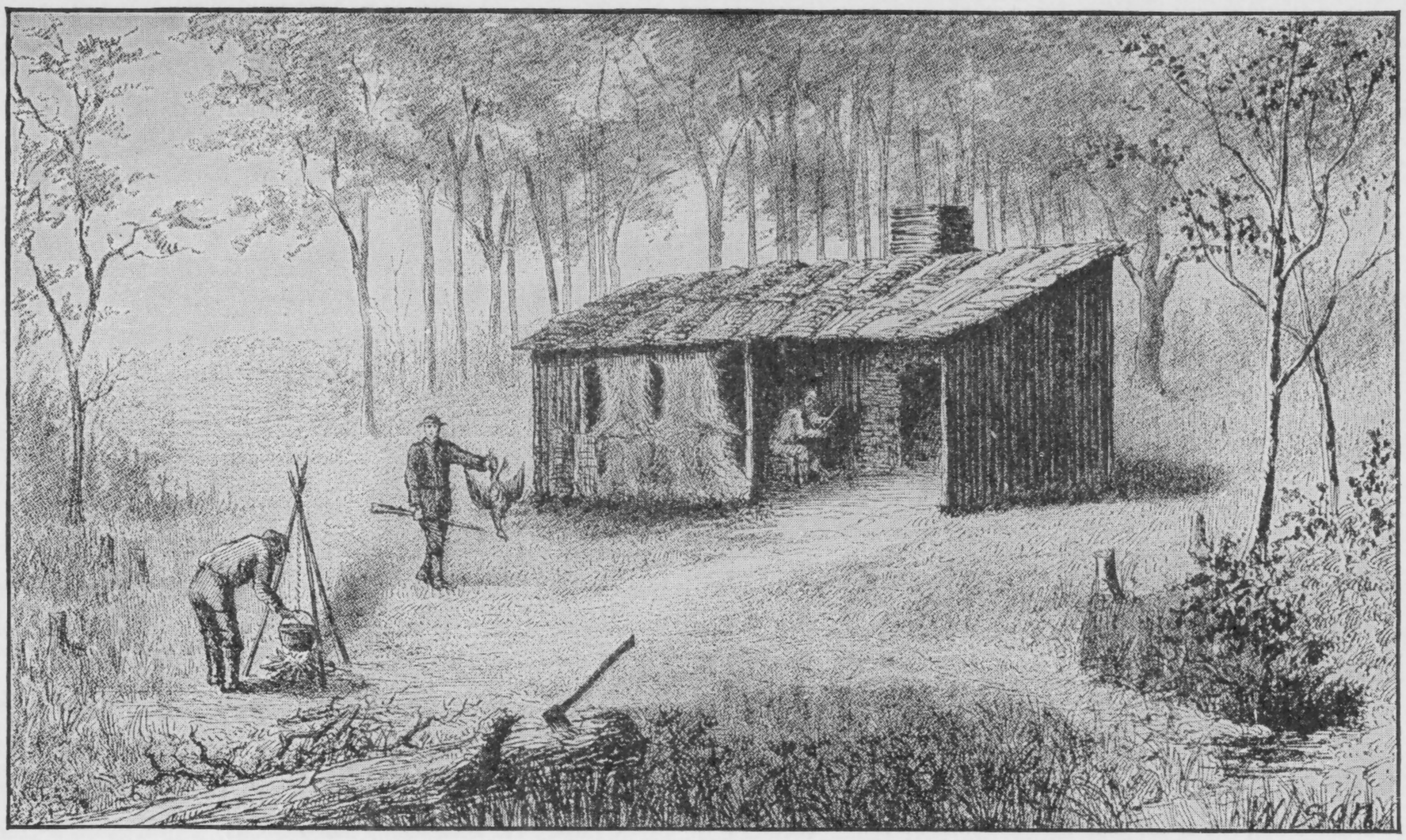
"Never mind," she said. "I know father will be sure to find us."

Back home, Daniel Boone, Junior, seven years



"Somehow, in the midst of their mirth, the paddle slipped out of her hand"

A tracing design for little readers.

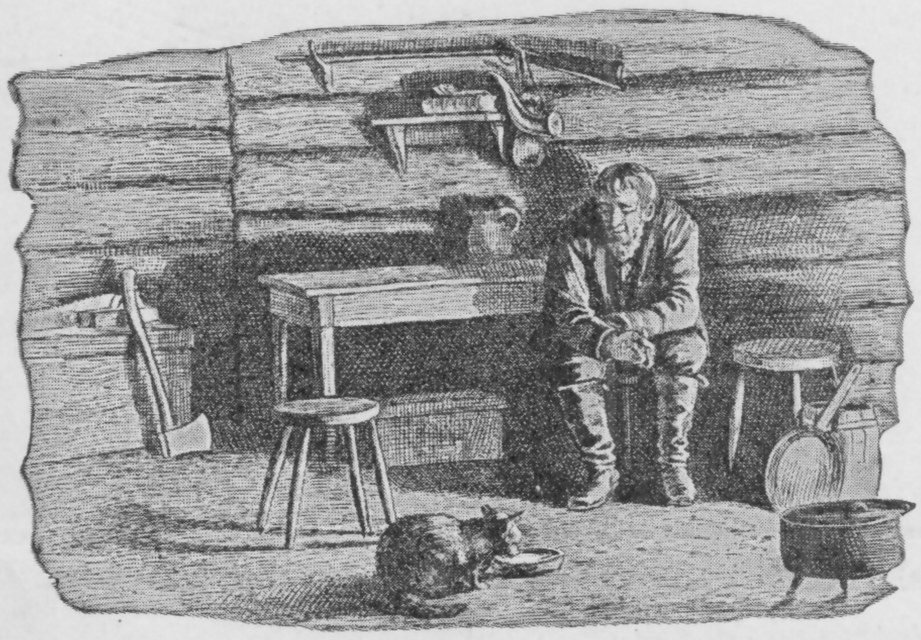


"A half-faced cabin such as their fathers still built when hunting"

old, was playing bear. He was a very fierce bear indeed. He growled so fiercely and advanced so furiously that little Johnny, who was only three, began to cry, and the play had to stop until Becky, his sister, could comfort him.

The smaller settlers of Boonesboro were playing keep house, but the children today never think of such adventures as they went through in their housekeeping. They had gathered branches of trees and built a half-faced cabin such as some of them had lived in at first. It was exactly the kind their fathers still built when they went on one of their prolonged hunts where such a lodge was their only shelter for weeks. Dicky Calloway, in his enthusiasm, had even dragged out the bearskin that served for his bed-cover and hung it up on the open side to shut out the wind. It made no difference to these small pioneers that the wind was a July wind, warm and sweet-scented.

From this realistic house little hunters were issuing to mount prancing horses made of branches with long sweeping tails. Each one carried a stick gun, and they made wonderful shots at make-



Interior of a Boonesboro Cabin

believe bear, deer, elk and buffalo. These were all impersonated by the one small boy, Daniel Boone, Junior; but he could growl terribly and imitate every wild animal of the forest.

The mothers laughed when they heard the clamor of the children at play. Betsey and Fanny Calloway and Jemima Boone, the three larger girls of the settlement, had gone down to the river.

The Children at Play

The mother of little Danny and Jemima sat in the doorway of her log cabin working over a piece of deerskin. She was going to make it into a hunting shirt for her husband. Cloth was impossible to buy and the settlers used skins, Indian fashion, a great deal.

"How much noise the children are making!" she said, smiling. "What can they be playing now? That doesn't sound like bear hunting unless—unless they have seen a real bear!"

"Help! Help! Father! Mother! Come! Oh! Oh! Oh!"

The end of the cry was strangely smothered. It seemed to come from the farther bank of the river. The children could not be there.

"Something has happened," thought the mother in sudden terror. She ran down to the river bank. But not a sound! Not a girlish figure in sight!

"Jemima! Betsey! Fanny!" she called. "Where are you?"

Not a voice answered. A squirrel chattered. A jay screamed. With sudden fear, she gazed

"With terror in her heart, she sped down the bank"

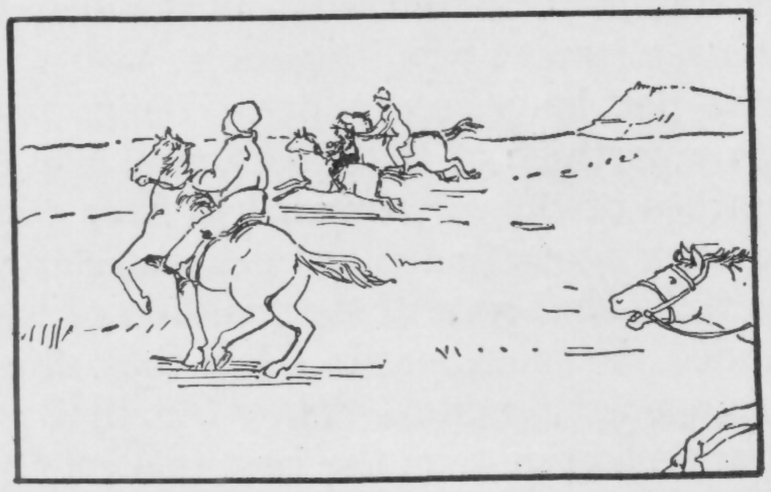
anxiously up and down the bank. Where was the canoe? She could see the marks where it had been pushed into the water. Plainly the girls had gone out in it. Had it overturned?

With terror in her heart, she sped down the bank. Below the settlement she caught sight of the canoe floating on the north side of the river. It was right side up, but empty. Faint and far away came one more smothered, inarticulate scream, checked with ominous suddenness. On the farther bank the ground was trampled as by a struggle. A fearful thought made her heart almost stop beating.

Indians! There had been so many months with no trouble from the savages that the settlers had come to feel secure. But the red men often had done terrible things to the pioneers of Kentucky. Had they now seized and carried off the girls? Were those muffled cries their screams for help?

The wife of Daniel Boone wrung her hands, those strong, capable hands that could do so many things. They were helpless now. The canoe was gone, and she could not even get across the river. Sick with fear, she sped back to carry the dreadful tidings.

The stricken group of women and children listened. The men and the older boys had gone



"It took an appallingly long time to gather them"

hunting, for hunting was as necessary to the subsistence of the little colony as cultivating the fields.

It took an appallingly long time to gather them together. Daniel Boone could not be found at all, for he was wont to hunt far away. With greatest haste, Colonel Calloway, the father of Betsey and Fanny, with a party of six, including, you may be sure, young Samuel Henderson, rode out on all the horses the settlement possessed, hop-

"Swift and unerring, a bullet sped to the savage's breast"

ing to cut off the Indians at Lower Blue Lick as they crossed Licking River on their way to the Shawnee town.

"Ma, do you think they will find them?" queried young Danny, wide-eyed. "Will they bring Jemima and Betsey and Fanny back?"

"Oh, I don't know! I don't know," his mother answered chokingly. "If your father was here, he would get them."

"When will Pa come back, Ma?"

"Nobody can tell. When he goes hunting he may stay out any time."

But Daniel Boone was as keen as any Indian to discover from the smallest signs what was going on. Something told him, even in the deep woods, that the settlement was in trouble.

It was not long before little Danny, peeping through a porthole of the blockhouse, whither all the families of the settlement had fled, discerned the familiar figure in fringed deerskins approaching the tight-shut gate of the palisade of logs that surrounded the blockhouse. How they all rushed down to open it for him! They felt that he was a greater protection than the best fortifications. "Can you get Jemima back, Pa?" quavered little Danny, clinging to his arm. It was no time to be hindered by a child, but the strong man of the settlement did not shake him off.

"Yes," he said; and even Mistress Calloway felt a relief, though her own husband had started out on a rescuing expedition with half a dozen mounted men.

Daniel Boone went out on foot, with only three men, for it was not safe to spare more from the settlement. His quick eye saw the broken branches and the torn bits of cloth; and while the other party was chasing an imaginary trail, he was following a real one. Before captors and captives had gone many miles he was following in their wake with his little party, noiseless as silence itself.

The savages were getting tired of their captives. For Indians, while they were fairly patient with the strong and well who fell into their hands, showed no kindness to the weak and sick. Fanny, the youngest of the girls, had sprained her ankle, and for the last five miles had been able only to hobble along painfully. At last she sank to the ground, unable to go a step farther.

"Ugh!" muttered the impatient savage who had been dragging her along. He snatched his tomahawk and flourished it over her prostrate head. A moment more and there would have been only two captives.

Bang! Swift and unerring, a bullet sped to the savage's breast, and the tomahawk dropped from a lifeless hand. Another bullet struck down Jemima's captor. The Indians could see no one and had no idea how large a force of whites was upon them. The three remaining Indians fled swiftly to the shelter of the deep woods. Though it would have been easy for them to find out how small the firing party was, and follow or ambush them, yet the whites never saw anything of those three Shawnee warriors.

The return home was a delightful trip for the girls, and if they had not been troubled about their mothers' anxiety, they would have been glad that Fanny's lameness made their progress slow. Daniel Boone knew a hundred ways to make such a trip comfortable. He made beds out of hemlock boughs for the girls. With his rifle he could bring down any kind of game, and he could dress it and cook it to perfection. He had even brought with him in that hunter's depository—the front of his

"His quick eye saw the broken branches and the tiny torn bits of cloth"

Trace and transfer this drawing of Daniel Boone, and color with paints.

deerskin shirt—the package of salt which the settlers found such a necessity to provide for in those days. Salt they had to make for themselves by boiling down the water of certain salt springs.

The journey was like a pleasure excursion, and Jemima and Fanny were a little sorry when it was ended. But Betsey was not sorry. Her girlish thoughts had kept turning to that other rescue party on horseback, the party that had failed to find them, with her father and young Samuel Henderson at its head. But the next thing in the annals of Kentucky was a wedding in August of Betsey Calloway and Samuel Henderson. In the quaint old chronicle of the time, it is written that the marriage was celebrated with great merriment. And the boys and girls, Danny and Dicky, Becky and Jemima, and Fanny and the rest, thought it was the most wonderful party of their lives.

A Little Boy of Early California

The territory now comprised in the states of California, Nevada, Colorado, New Mexico and Arizona was ceded to the United States by Mexico in 1848, after the Mexican War. Texas had previously been made a state, though its boundaries were extended by this war. California was seized in June 1846, without a struggle. It was a practically unsettled country, and for more than three hundred years had been a field of missionary work conducted by Spanish priests of the Jesuit and Franciscan orders. In 1846 there were missions at San Diego, Los Angeles, Santa Barbara, San Jose and San Francisco. The purpose of the mission was to teach the Indians Christianity, and to train them in the arts of civilized life. The chief occupations of the missions were farming, cattle raising and growing apples, pears, peaches, apricots, plums, oranges and pomegranates. The life of the missions was quiet and peaceful, the priests setting the example of industry by working in the fields side by side with their Indian converts.

"OH GOOD, good! Tomorrow will be wash day!"

This was said in Spanish, not English, for the earliest little white Californians were Spanish. There were ever so many of them in the big low rancheria whose walls were three feet thick, made of mud and chopped grass pressed into great cakes and dried in the sun, called *adobe*. There were seven children, Teresita and Juanita, Luis and Francisco, Carlos and Dolores, and little Antonio, and every one of them was happy when wash day came.

For it didn't come every week. It was an event, a sort of rancher's picnic. Then Miguel hitched

"The clothes were carried to the river"

up a yoke of oxen to the clumsy creaking two-wheeled cart which was their only vehicle, and all the children were packed in beside the soiled clothes, or rode along in front or behind, on wild looking, half-broken *bronchos*, delighting in the way they shied and jumped and pranced.

Those little early Californians had learned to ride a horse almost as soon as they could walk, and it was a vicious beast that could unseat them. The women servants went too, and some of the men servants, and they carried along a picnic dinner that had been prepared in the great smoky kitchen.

QUESTIONS ON "IN THE DAYS OF DANIEL BOONE"

1. What do you know about the Declaration of Independence? 2. Why had these people left the towns and come here into the wilderness with the Indians? 3. Why were they called "Pioneers?" 4. Can you trace the road that Boone built through the Cumberland Gap? 5. Describe a blockhouse; a stockade. What were loopholes for? 6. How was a dug-out canoe made? 7. Were the Indians in a "war-party," or did they just take the chance that offered to steal the girls? 8. Why didn't they kill them? 9. What would they do with the girls after they got to the Indian village? 10. Why did the girls break branches and drop bits of cloth? 11. How would you build a "half-faced cabin?" Which way should it face? 12. Why did Betsey's mother think first that the boat had overturned? Why did she not think of the Indians? 13. How did she make sure that the girls were captured? 14. Why did Colonel Calloway and his party set out on horseback for the ford of the Licking River, instead of following the tracks of the Indians? 15. How do you suppose Daniel Boone could tell that all was not well at the cabins? 16. Why was he so sure that he could get the girls back again? 17. Describe the way in which you think Daniel Boone followed the trail of the Indians. 18, Why did the savage want to kill Fanny when she could not walk any further? 19. Was it fair to shoot the Indians from a hiding place? Would they have done it? Why did they run away without trying to fight? 20. Describe the journey homeward. The wedding celebration.

"He had put down an admiring small finger"

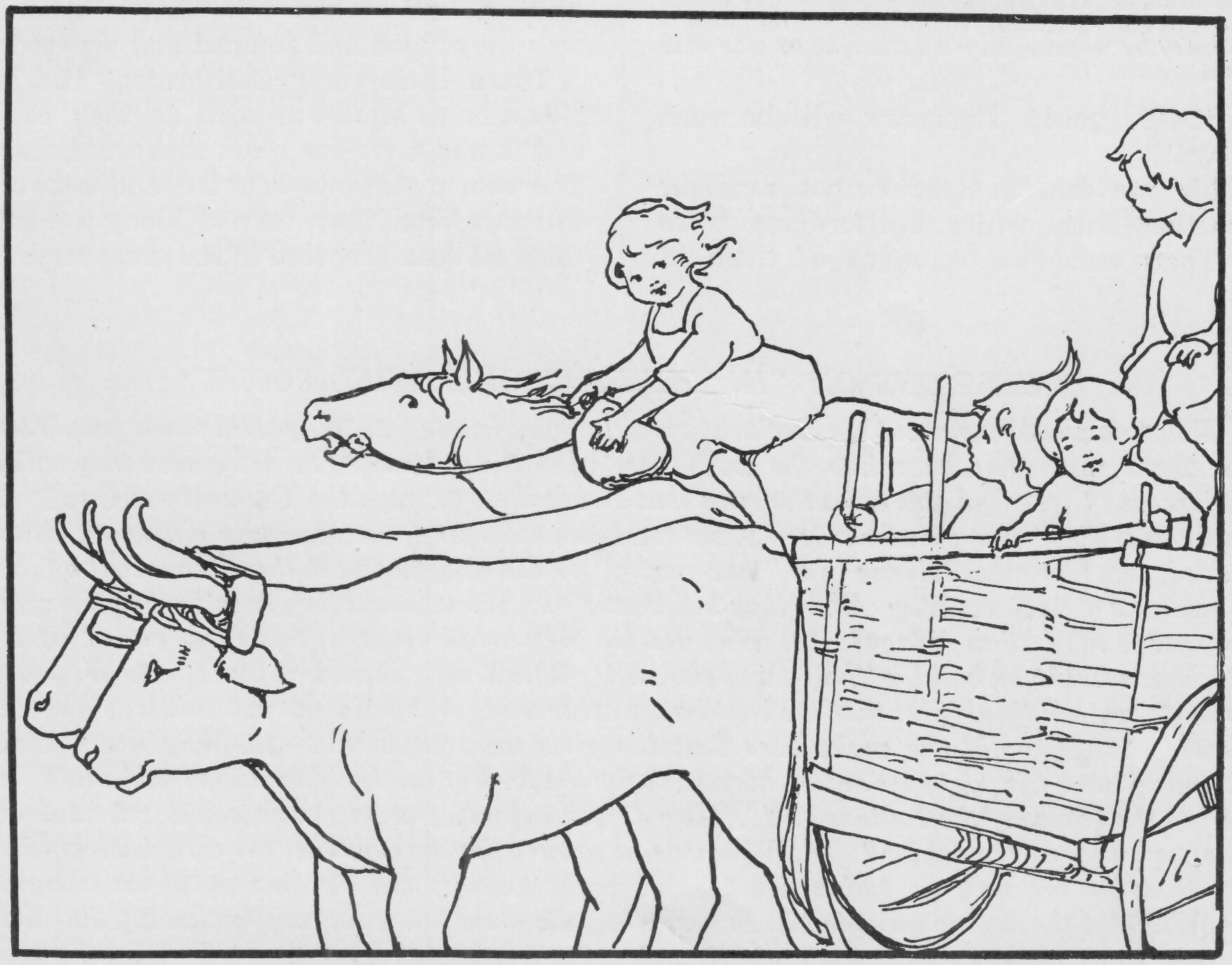
The washings of that day were not done in tubs at home. The clothes were carried to the river and soused and soaped and spread out on the rocks and beaten until they were as white as the snow on the tops of the mountains.

But there was one piece of linen that was not tossed with the rest into the two-wheeled cart. It was wrapped in a cloth and tied very carefully to the pommel of Teresita's saddle, and she hardly took her hand off from it all the way. It was a beautiful cover of drawn work which the little girl had made all herself. No servant's hand was allowed to touch it. It was too precious. With her own deft fingers she unrolled it and dipped and spread and beat it with the greatest care. Then she left it lying on a great rock to dry and joined her brothers and sisters in their fun.

They waded and splashed. They climbed trees and swung on grapevines. They gathered the sweet wild berries, and stained their hands and their mouths all purple with them. They ate when dinner came, as hungry as little pigs, and then went on with their merry-making again. Washing day was just a great picnic to them.

And the servants regarded it in much the same way. They laughed and dawdled and played jokes, and though old Manuela scolded because the work did not get on faster, they paid very little attention to her. They would have worked harder under the eye of the mistress, but she was not feeling well and had remained at home, giving the charge of affairs to Manuela and Miguel. But they did not get on very well together, and in the middle of the afternoon Miguel decided that he must return to the ranch to attend to some matters there, leaving his son Juan to drive the oxen home. Manuela only said, crossly, "Well, take that Antonio home with you. The boy acts today as if he were possessed. He's into mischief all the time."

Now, Antonio was Miguel's favorite, and ordinarily he would have been glad to take him. But today, because he was put out with Manuela, he



"Miguel hitched up a yoke of oxen to the clumsy, creaking, two-wheeled cart"

A tracing and color card.

did not want to do anything to please her. So he called none too loudly, "Antonio, Antonio, you are to come home with me."

No Antonio answered. "Tell Manuela I can't find him," Miguel said carelessly to Carlotta who was spreading wet clothes out to dry in the sun.

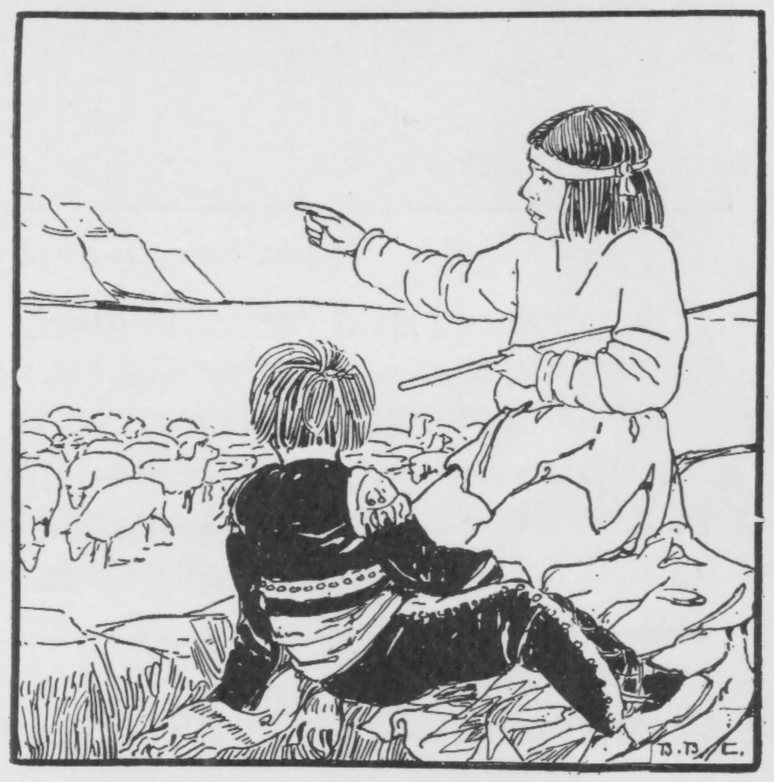
"Antonio was sleeping soundly"

But Carlotta did not half hear and straightway forgot all about it. Manuela thought the little boy had gone with Miguel and told the others so when they asked for him.

Where was Antonio? To tell the truth he had been into new mischief and he thought it wise to keep out of sight and not answer when he was called. And yet he had not meant to do wrong. In a spasm of little-brotherly admiration he had bent over Teresita's beautiful work as it lay spread out on the great rock. He had put down an admiring small finger just to touch a drawn work butterfly with outspread wings in one corner. But alas, the finger was berry-stained and the cloth was wet, and a great purple stain showed just where he had touched it. Aghast he snatched it up to try to wash the spot out, but it caught on a sharp point and tore a great hole. It was then that little Antonio felt it the part of wisdom to go behind a large tree a considerable distance from the rest and remain there a long time.

The afternoon sunshine was very warm and pleasant at the foot of the tree. Little Antonio had been up since five o'clock to be on hand to take in every bit of the joys of washing day, and he had been ever since as active as it was possible for a small boy to be. With a little sigh he stretched himself out on the warm ground; and in five minutes he had forgotten the torn table cover and everything else.

The washing proceeded with a slowness most irritating to Manuela, and by the time they were

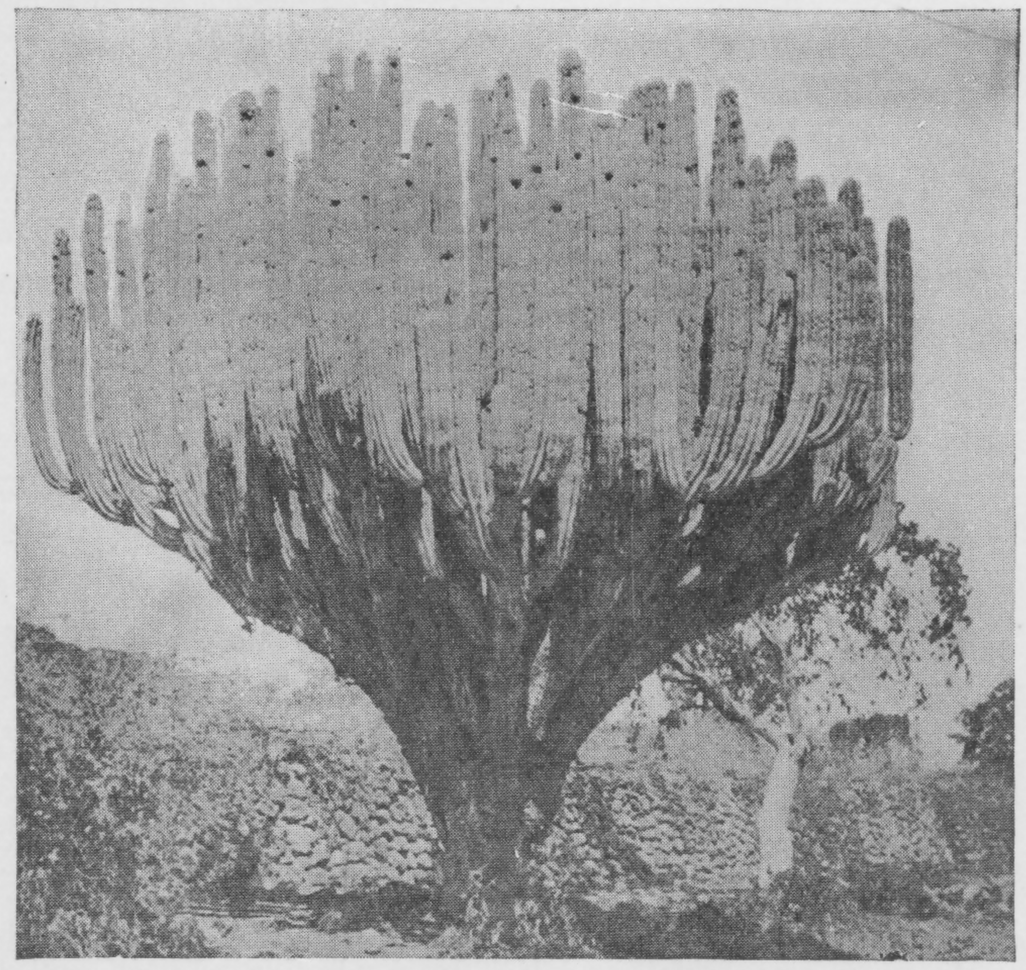


"They stopped right there"

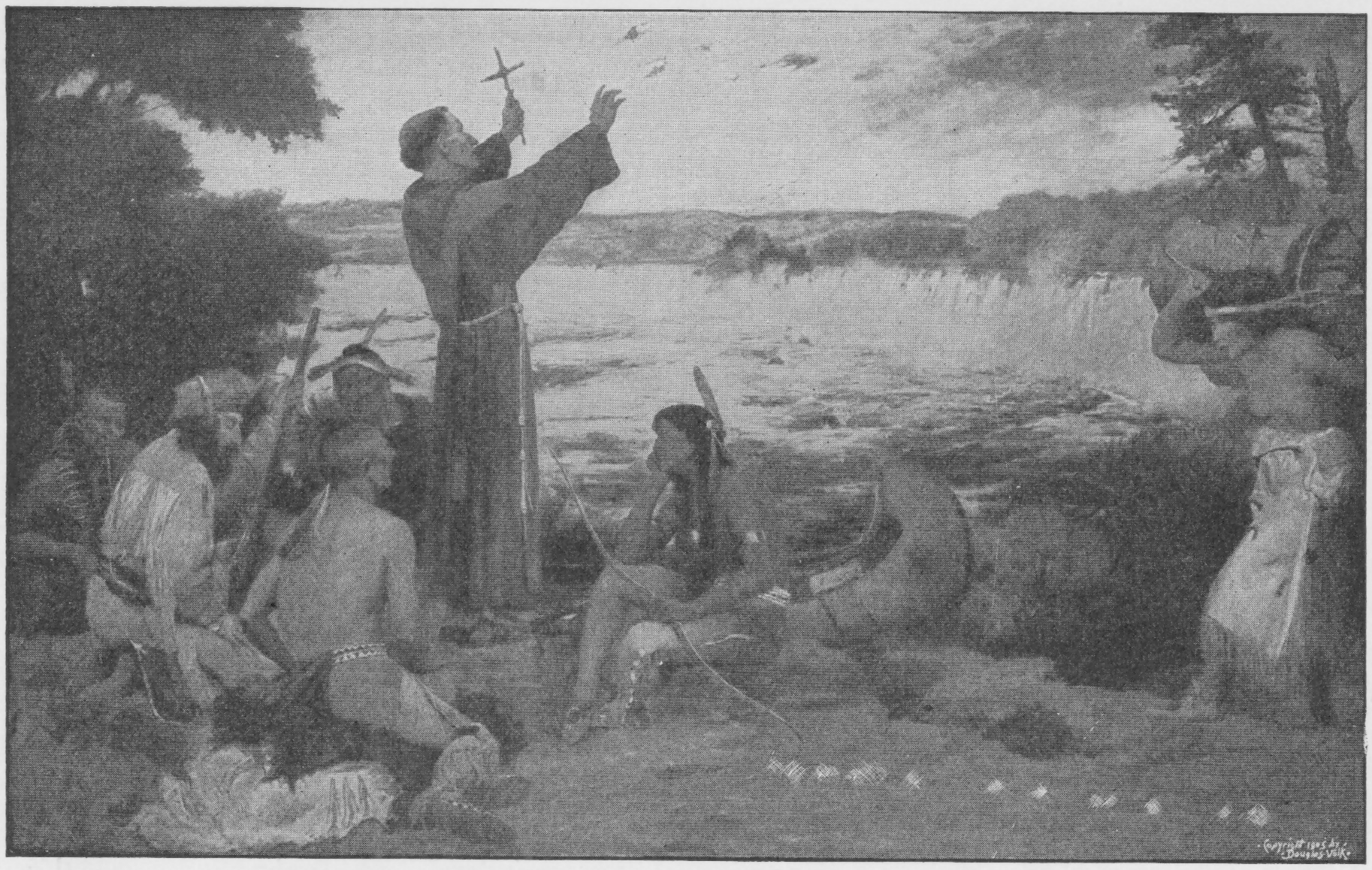
ready to start for home they were in a great hurry to get through the woods before dark. The creaking wagon wheels made as much noise as a brass band and the whooping riders as much as a band of Indians, but Antonio did not hear a sound of their going. He was not even missed when they got home, for the mother was not about to round up her flock and it was assumed that he had come home in the afternoon with Miguel. Sometimes the little fellow slept in one bed and sometimes in another, and no one thought to look and so discover that he was missing from each.

Meanwhile little Antonio, curled up in a little bunch at the foot of the big tree, was sleeping as soundly—though hardly as warmly—as if he had been in his mother's big bed.

Sleep was kind to the little fellow. The big dark which would have frightened him greatly if he had been awake passed by unnoticed. Bears prowled around him and a mountain lion leaped fairly over the motionless little figure. The forest was full of terrifying night noises of beast and bird, but he did not hear one of them. He did not waken until the rising sun touched the leaves above him.



A Cactus on the Mesas of Old California



"He told him how the good Catholic fathers first came to this Indian country"

He was hungry and cold, and his lonely little heart was filled with a great longing for his people. Oh, for a sight of his father or his mother or Teresita or Miguel, or even cross Manuela! But with the thought of them came also the memory of the mischief he had done the afternoon before.

He did not think how wild with anxiety they would be over missing him. He thought only of how he had been a naughty boy and how punishment was due to be meted out to naughty boys by their proper guardians. It is doubtful whether he could have found the way home if he had tried, but instead, he tried to keep away from it. He had made up his mind that, much as he wanted to see home, it was not a safe place to seek just then. A scrap of the older children's conversation at the merry noon meal floated up in the current of his memory.

"What would you do if you were lost in these woods?" Teresita had asked, and Luis had answered,

"I'd follow the river. That would take me straight to the mission where the good fathers are."

The river was close at hand. Antonio decided that he would follow it, and, by good fortune, he started the right way. His sturdy little legs were active and strong. By the time his anxious family had reached the spot where the washing had been done and were searching for him, he was far away and they could not find a trace of him.

Josè, the Indian shepherd boy, was watching a flock of the mission sheep on the edge of the *mesa*. He was stirring restlessly about and scanning the distance on all sides. The quiet life of a mission shepherd did not suit him very well. A short time before he had been a wild Indian roaming where he would. But now he had become a *neophyte* and been baptized and must do what the holy fathers thought it best for him to do.

Far along the bank of the river he saw a moving black speck. Was it a wolf or a coyote? Slowly it came nearer, and lonely Josè could have shouted with joy, for he saw that it was a boy.

But such a little boy, and walking so wearily! Indeed, poor little Antonio could hardly drag one foot after the other. The gay little scarlet jacket trimmed with silver braid and the small trousers of green velvet were spotted, stained and torn. His hands and face were so scratched and covered with berry stains and dirt that it was impossible to tell from their color whether he was an Indian or a white boy.

With genuine kindness Josè cared for and comforted him, and fed him with the larger part of his own lunch of *atole* or ground barley. But, faithful young neophyte that he was, he never thought of taking the little lost boy to the mission until his day's work was over. Instead, he told him stories to amuse him. He told him how the good Catholic fathers first came to this Indian country to establish a mission among them.

"They stopped right there," he said, pointing to where the mesa was crowned by the little cluster of mission buildings, the chapel lifting its tower and dome against the blue California sky. "They stopped there and my people went out to see them, but had not yet made up their minds whether they would kill the white strangers or let them stay. Then the father-with-the-long-robe unstrapped a most curious box from the back of the mule they were leading, and we waited to see

"Jose drove his sheep back"

what he would take out of it. But he took nothing out of it. Instead, he took hold of a handle that stuck out from it and turned it round and round. And then the box began to sing—oh, most wonderful songs! It was like nothing else we had ever heard before.

"At first we were afraid and fell down on the ground in terror. But the father-with-the-long-robe told us to have no fear, that the sounds were holy music. It was praise to the Great Spirit that the wonderful box was singing. Then he gave us sweets, and told us he had come among us to teach us the will of the Great Spirit.

"We liked the sweets, and we wanted to hear the wonderful singing box some more, and so we told the white father that he and his company might stay if they would let us hear the wonderful box sing every day. And we helped them build their houses, and they baptized us with holy water and now we are their children and must do what they say."

"Can I hear the wonderful box sing?" asked Antonio eagerly.

"Yes, tomorrow is a *fiesta* and they will make it sing for us. You shall go with me to the chapel and hear it," promised Josè.

When the chapel dome showed black against the golden sunset sky Josè drove his sheep back to the mission corral, leading little Antonio by the hand. If he had understood how anxious white fathers and mothers are to know the whereabouts of their little boys he would have taken him at once to the padre, who would have sent word to the ranch. But the Indian boys were used to roaming far and wide, and their parents never worried. It did not occur to Josè to do anything with the small rancher except keep him with him all night. Antonio enjoyed it. He had never before eaten anything that tasted so good as Josè's supper of *frijoles* or beans, except, indeed, his dinner of atole, and he nestled down beside his new friend, on his bed of pulled grass in the Indian boy's quarters, as happy as a king.

It seemed only a very little while before Josè shook him to waken him, and it was really before daybreak.

"Come," said Josè. "We must go to mass and after that we shall be given our breakfast."

Antonio, half asleep, stumbled more than once as they crossed the square court surrounded on three sides with the mission buildings, but Josè pulled him steadily forward.

"Come on," he said. "If we don't hurry we shall be late and the padre is angry with late ones."

He was, indeed. Two or three sleepy members of his flock tried to conceal their tardiness from him by slipping in at a little side door after the mass had begun, but he stopped and glared at them in the midst of the solemn service.

"I shall have that door walled up," he muttered.

After mass they all trooped to the door of the great mission kitchen, where each one was given a bowl of atole for breakfast.

"He managed to hang it up"

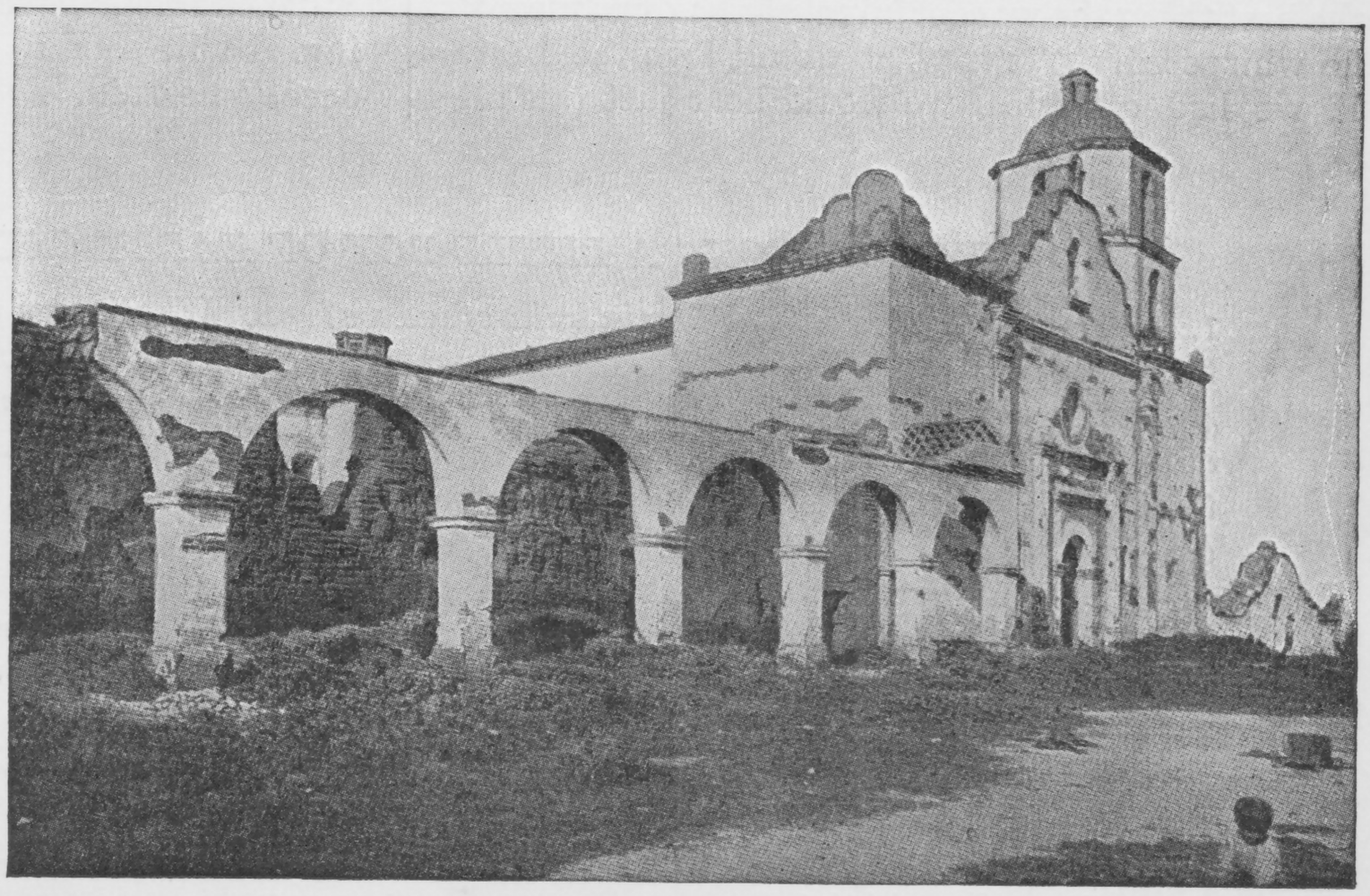
"Now," said Josè when it was well over, "you shall hear the wonderful music box."

For, in honor of the *fiesta* the good fathers had promised to play every tune in it to the assembled people.

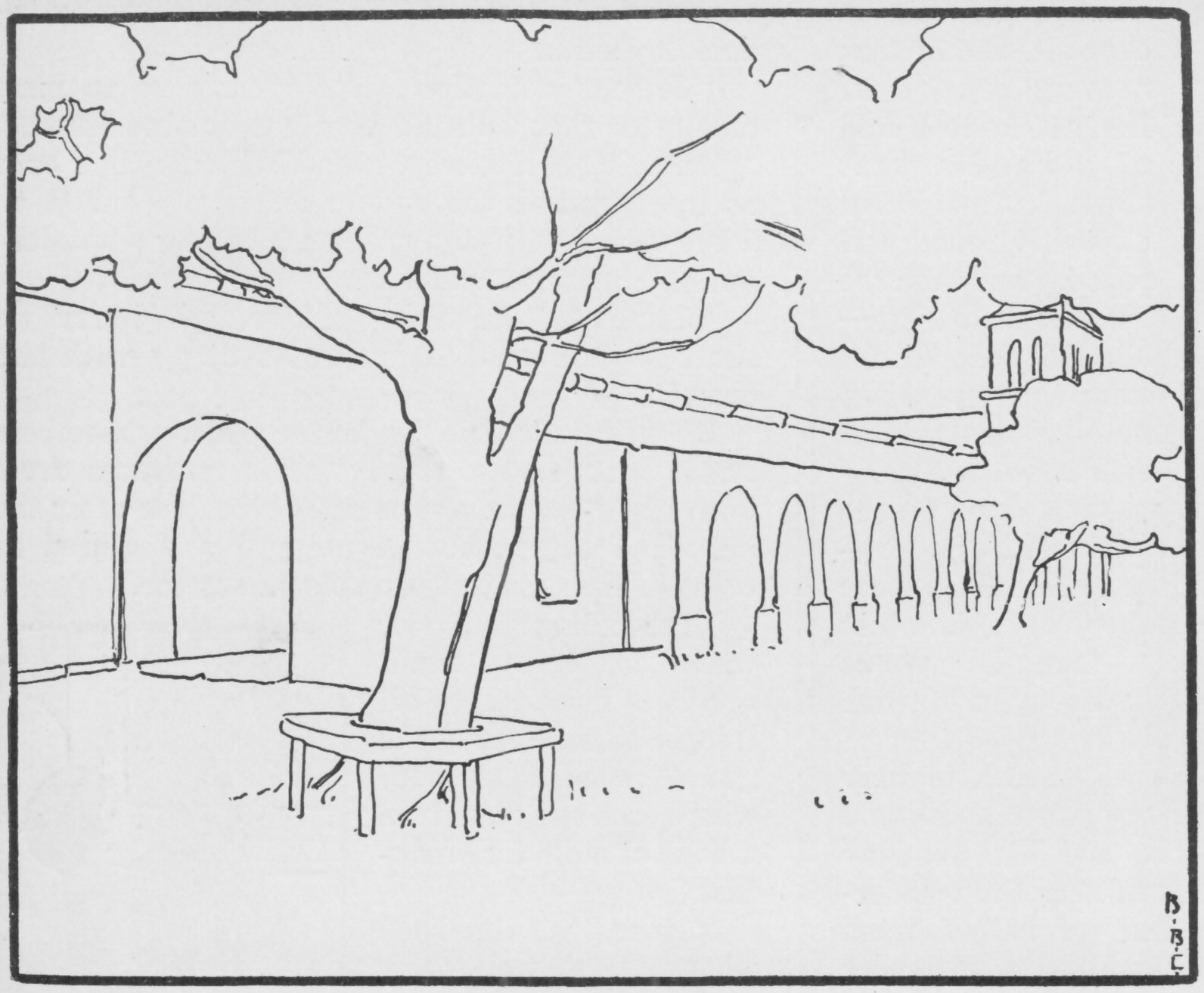
Every Indian on the premises gathered in the chapel, and their faces were very eager as they listened for the wonderful music to begin.

"This," said the holy father gravely as he began to turn the crank, "is 'Adeste Fideles.'"

The joyous old Christmas hymn floated up to the rafters, which were painted in diamond-



"When the mission buildings were in ruins"



A California Mission

Transfer this design and color the trees green and the buildings a soft yellow.

shaped patterns of red, yellow, white and blue. The father who manipulated this quaint tin pipe hand-organ held in his left hand a sheet of parchment bearing the names of all the selections it played.

"This," he said as he began a second, "is 'Gloria in Excelsis.'" But at the third selection the padre announced simply, "This is Number Three."

Josè nudged Antonio. "Now you will hear the best thing the wonderful music box can play," he whispered. "It is what we all love the best. If we had our wish, we would hear just this all the time and no other."

Scarcely was the tune struck up before heads began to nod and bodies to sway in time to its rhythm. This was no hymn tune. It was a waltz, the maddest and merriest kind of a waltz.

All unconscious of where he was or what he was doing, little Antonio tripped into the vacant space before the organ and began to dance about it, clapping his hands and kicking up nimble heels like a veritable elfin sprite. He was so little, so utterly void of disrespectful intent, that even the stern padre looked at him with a smile and motioned with his hand to restrain a shocked attendant who advanced to draw him back.

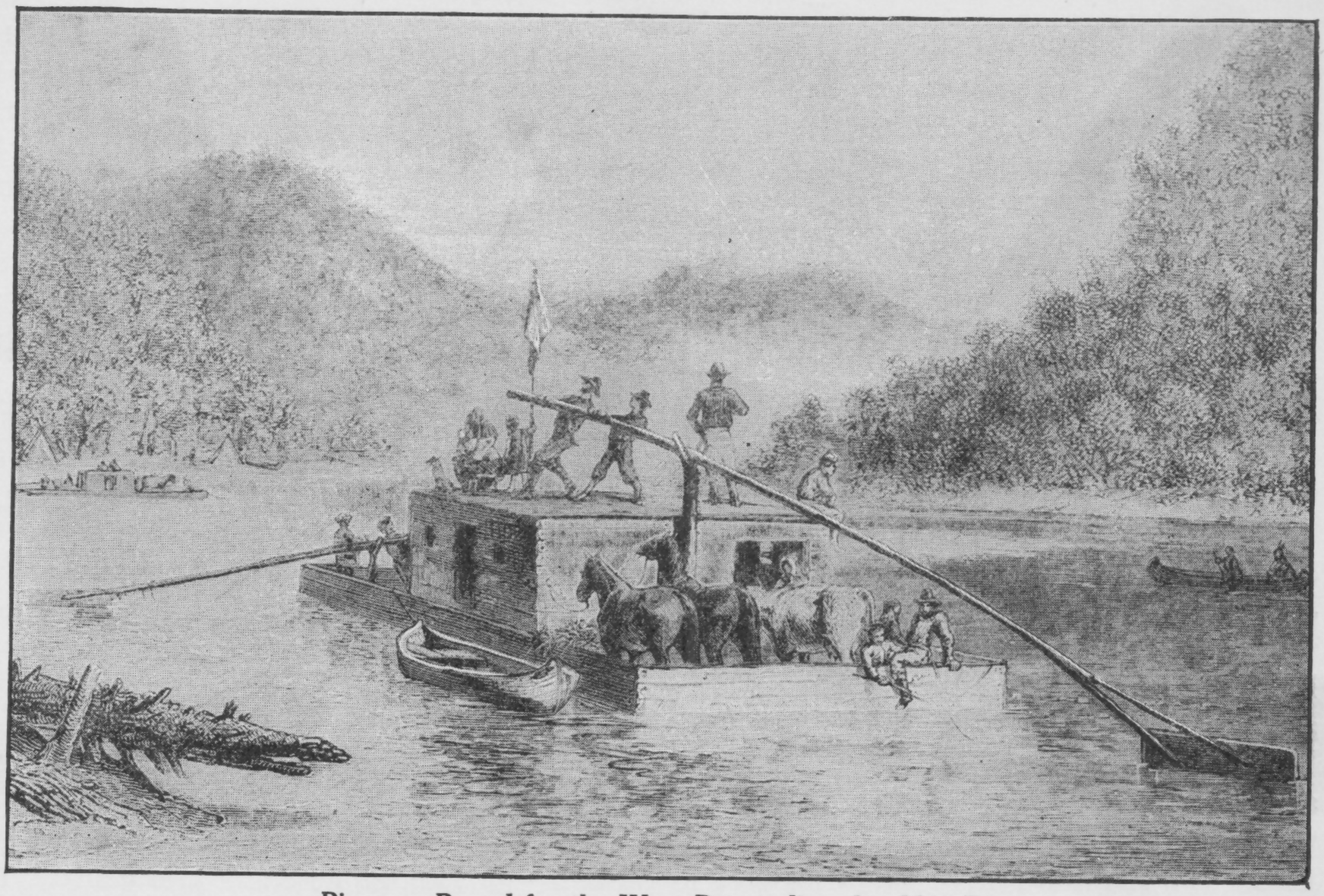
When the waltz was finished, Antonio returned to his place beside Josè, almost unconscious that he had left it; then Number Four, which was a Te Deum, began. All the other selections were religious music. The Indians loved them all, but they loved the lively Number Three far better, the number which the fathers would have cut out if they could have done so.

When the Indians were dismissed, the padre called Antonio to him and questioned him about his home.

"You should have been brought to me last evening. I will send a messenger to your father at once," he said.

QUESTIONS ON "A LITTLE BOY OF EARLY CALIFORNIA"

1. Why were houses in California built of adobe? 2. What were bronchos? How were they captured? 3. Why were washings not done at home? Describe the method used. 4. What is drawn work? Why was it so precious? For what was it intended? 5. What did the children do all day? 6. What mischief did Antonio get into? 7. Why was Antonio not missed? 8. How long did Antonio sleep under the tree? 9. Were there any dangers there? 10. What did Antonio decide to do when he woke up in the morning? 11. Can you find the meaning of mesa, neophyte, fiesta? 12. Who was Jose? 13. How did the padres come among the Indians? 14. What was the music box? What was its effect on the Indians? 15. Can you find the words and music of the "Adeste Fideles?" 16. Why would the padre not give the name of the third number? Why did the Indians like it best? 17. Why did Antonio dance? Why did it not seem irreverent? 18. How did Antonio's father think to inquire at the mission? Why did the family bestow gifts on the mission? 20. Why did the mission building afterward fall into ruins, and where did the Indians "vanish" to?



Pioneers Bound for the West Descending the Ohio River

But it was not necessary. Already some one was pounding on the mission door to inquire in agonizing anxiety whether any news had come to the mission of a little lost boy. The padre was called, and Antonio was left for the minute alone. Just then a sportive breeze picked up the parchment bearing the names of the selections played by the organ—the only list in the mission—and blew it down to the little boy's feet.

He lifted it reverently. He was not tall enough to put it back on top of the organ; besides, the wind might blow it down from there again. He knew it was precious, and he looked carefully about to find a place where it would be safe. It had been hung up before. There was a peg in the little side door just high enough for him to reach. Standing on tiptoe, he managed to hang it up in this place—and then he forgot it forever for he heard his father's voice.

"Oh, father, father," he cried, darting forward and flinging himself upon the *Senor* like a small whirlwind, "take me home!"

The family of Antonio was perhaps unduly grateful to the fathers at the mission for the safety of their small son, seeing how little they had had to do with it. They bestowed many gifts upon the mission, and Teresita was so thankful that she presented the very wonderful drawn work cover that Antonio had torn, but now so exquisitely mended that no one would dream there had ever been a rent in it. It was given to the mission chapel for an altar-cloth.

The losing of the parchment list of the organ selections was not connected with Antonio, though search was made high and low for it. The little door was walled up as the padre had threatened, and the workmen never noticed the list hanging on it. The list seemed to be lost forever, and it was lost for a hundred years. Then, when the mission buildings were in ruins and the mission Indians had vanished like snow in the springtime, somebody, with the laudable purpose of preserving the ancient landmarks, undertook the restoring of the old chapel. The hidden door was brought to light, and hanging on it was the strip of yellowed parchment with the lost names. So we of today know what Antonio and José never found out, that the mysterious, alluring Number Three which the vanished Indians loved so well was "The Sirens' Waltz."

A Boy's Part in the Journey to Oregon

Oregon was the name given to the country north of 40°, north latitude, and west of the Rocky Mountains, which now includes the states of Oregon, Washington and Idaho. It was discovered in 1792 by Captain Robert Gray, of Boston, who entered the mouth of the Columbia River in a trading vessel. In 1803 Jefferson secured from Congress an appropriation, with which he sent Lewis and Clarke to explore Oregon. They left St. Louis in May, 1804, followed the Missouri River to its source, crossed the mountains, and followed the Columbia River to the Pacific. In 1818 Oregon was occupied jointly by England and America. In 1840 the United States, unaware of its value, was on the point of abandoning Oregon. Marcus Whitman, a medical missionary, in the winter of 1842-3, made the stupendous journey from Oregon to Boston and Washington on foot, to protest against the proposed action. His protest was successful, and Whitman returned to Oregon. He and his family were massacred by the Indians in 1847.

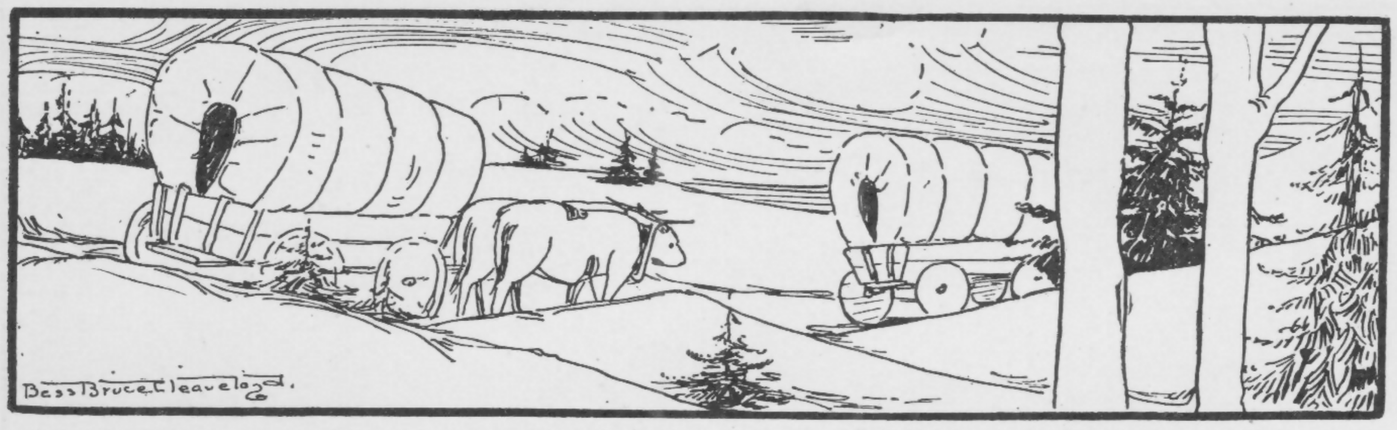
YOU can't take a wagon into Oregon."

"Why not?"

"You could never get a wagon over the mountains."

"But we came over South Pass."

"Oh, South Pass is nothing compared to the trail over these mountains into Oregon! I tell you, wagon never has gone over these mountains, and wagon never can. Why, at Fort Hall I can show you a corral full of wagons and everything that could be put into them, left behind because it was no use to try to take them any farther. Hundreds of dollars' worth of tools and clothing and furniture! You may be sure settlers would



"Painfully toiling along in the white-covered train of 'prairie schooners'"

not abandon such things if there was any way to take them on."

"But—but—can't the folks get to Oregon?"

"Oh, yes, they get there—if they are lucky. But they tie their bedding and pots and provisions on the backs of their mules and oxen, and drive them over the mountains. It's the hardest six hundred miles of travel any of them ever attempted."

"Oh, dear!" Mary looked at John for comfort, and John—boy as he was—had actually turned white under all the dust and tan that covered his face. Six months before they had left home and friends, and had been painfully toiling along in the white-covered train of "prairie schooners" ever since. They had crossed the backbone of the Rockies at South Pass and had confidently believed that the worst was over. And now, when they were in very sight of the last chain of mountains that separated them from their journey's end, to receive this discouragement!

It was an English rider who gave them the disastrous tidings. He had come all the way from Fort Hall on purpose to meet them and tell them this.

"Maybe," whispered Mary, with some idea of driving that dreadful white anxiousness from her brother's face, "maybe the English don't know."

But the speaker heard her and glared at her fiercely.

"Don't know, girl? Who could know better than a man who has been stationed at Fort Hall for ten years! I tell you I have seen every train of immigrants that has gone into Oregon. They all left their wagons at the fort, every one."

The look and the words were more than the worn-out little girl could bear. Tears came to her eyes. But she must not cry before folks. She looked wildly around the circle of wagons, which were drawn up every night as a barricade against wild beasts and Indians. To the very farthest one she slipped away. Dropping down behind it she covered her face and cried as bitterly as a dismayed little girl can. But she took great care to make no noise about it. To know that she was crying would dishearten the rest. No one of all that brave company ever cried in sight of anybody else.

She thought she was completely hidden, but somebody missed her and came in search of her. Very softly a pair of scratched, brown feet—bare because they had worn their shoes until they had dropped off and no more were to be obtained—stole up beside her. A brotherly hand awkwardly patted her hair. A brotherly voice said huskily:

"There, there, there! Don't cry!"

"Oh, but, John, what shall we do? Mother can never walk over the mountains. She can't ride a mule with the new baby. We can't go on at all without the wagon."

"We can't stay behind. We'd starve, or freeze to death. I'll tell you, Mary, I'll ask Doctor Whitman if it's so. He knows everything about the trails. He wouldn't have tried to take us into Oregon if he hadn't known we'd get there.

"Doctor Whitman has ridden ahead to find the best place for us to ford the river tomorrow. I heard that Fort Hall fellow ask where he was as soon as he came into camp. I thought he wanted to see him, but I believe he was really glad that he was gone; I don't know why.

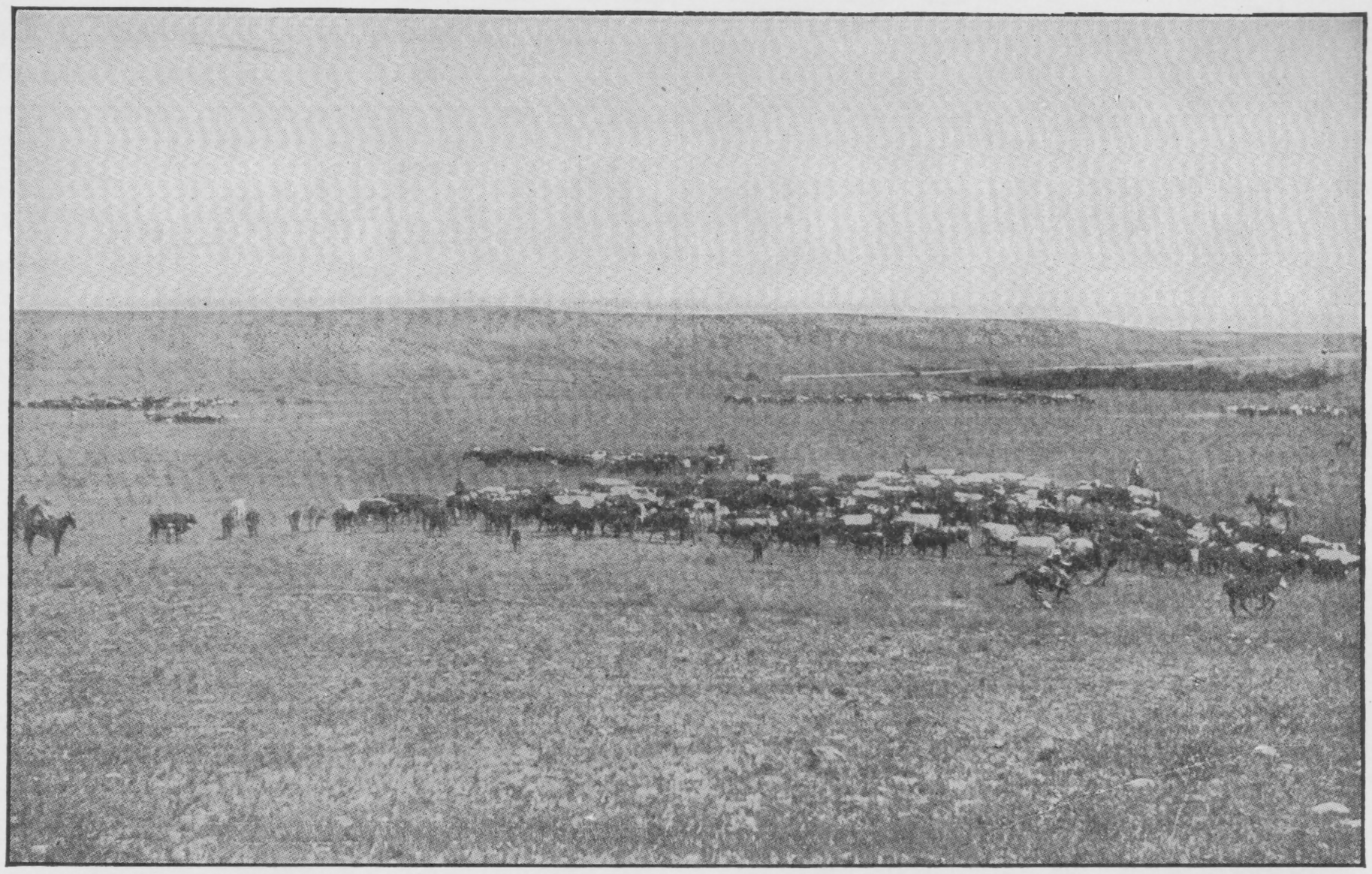
"We mustn't stay away any longer from mother, Mary. She is sure to want us. Here, I'll wipe your eyes."

Handkerchiefs were long a thing of the past with them, but he wiped the tears away very gently with the hem of Mary's apron. There never was a better brother than John.

"The speaker glared at her"

"Don't you worry any more, Mary," he whispered. 'I'll stay awake until Doctor Whitman comes back to camp, and then I'll go right away and ask him whether it is true that a wagon can't go over these mountains."

It was eleven o'clock when the good missionary doctor, Marcus Whitman, who held the unpaid office of leader, guide, physician, comforter, friend and chief adviser to all the long caravan, got back into camp. He had taken a long, hard trip



The Camp on the Prairie

while the others rested, to make sure of a safe route for them the next day. But, late as it was and tired as they were, a score of men—heads of families—were waiting to tell the doctor of the dreadful new trouble. The good doctor heard the story with unruffled serenity.

"It isn't true," he said. "The English fur company has simply given orders to discourage every American settler who starts into Oregon. They do not want to have it settled by Americans. That is all."

"But he said we couldn't take our wagons across the mountains! They said a wagon couldn't be taken across."

"That is not true. I myself took a wagon across the mountains into Oregon six years ago."

Wonderfully comforted and cheered, John betook himself back to Mary and the wagon. It seemed only a minute to him before the sentinels fired the four o'clock signals for the camp to get up.

"Oh, I can't wake up yet," he murmured sleepily. "I've just gone to bed."

"Oh, John"— Mary was almost crying at the necessity of rousing him--"you know you must wake up or else we'll be late getting ready to start, and lose our place in the line of wagons. To go to the end would be dreadful."

It was their father's assigned duty this morning to ride out and help in the rounding-up of the loose cattle and horses that were driven after the caravan, which gave the "cow column" its name. The cattle were allowed to graze at night and sometimes they strayed away to a considerable distance. So John made the camp fire and attended to the rest of the morning chores while Mary helped her mother. Mother wasn't at all strong yet; the baby was crying and fretful, needing much care, and so it fell to the lot of eleven-year-old Mary to get the breakfast by herself.

It wasn't much breakfast, just pancakes and fried salt pork, but the plains' pancakes required skill to bake them. They were not such little pancakes as we have on our breakfast tables. Each one completely filled the bottom of the big skillet in which it was cooked. And they were not turned with a knife or pancake-turner. As soon as one side of the cake was done, it was the cook's part to seize the long-handled skillet and give it a dextrous flip that loosened the pancake and tossed it up in the air. It was caught as it turned over coming down, and then the other side was browned.

Mother was very expert at tossing pancakes. So were father and many of the plainsmen who were used to cooking for themselves. But Mary wasn't so skilful, and more than one of the pancakes that she had tossed dropped raw side down in the sand.

"Don't eat them," said Mary. "Let me stir up some more batter."

"No," answered John bravely. "A little sand won't hurt me. I need it."

He knew how precious the flour was, and how small the store; so he picked up each dropped pancake, scraped it off as well as he could and put it back into the skillet to finish cooking.

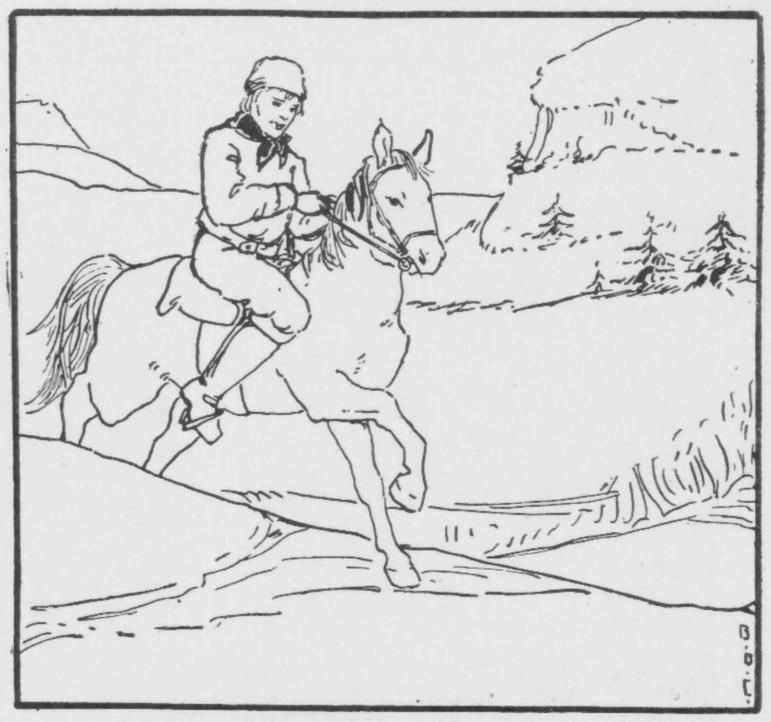
"I wonder why father doesn't come back?" he said, as their neighbor's oxen were led up to be yoked to the wagon. "It is getting near time to start. We may lose our place in the line after all."

He hastily crammed the last of his gritty pan-

cake into his mouth and ran to bring up their own oxen and hitch them to the wagon, something which father usually did every morning. Why didn't father come? At seven o'clock the signal to march would be given, and the wagons, divided into groups of four, would roll out, creaking and groaning, to start on the weary journeying again. The four that had gone first the day before would now be last in the procession—the place both of greatest danger and inconvenience—unless there was some wagon that was not ready to move out when the signal sounded; for such a belated wagon had to come last of all.

"John," said his mother anxiously, when the signal for the seven o'clock start sounded and still the father had not appeared, "I believe something has happened to your father. No, John, don't start the oxen! I'm going to stay right here until he comes."

"O mother, we'll lose our place in the line! Father'll catch up pretty soon. Probably he's chasing after some cow or horse that has strayed away," said John, trying to speak lightly and assuming an ease of mind he did not feel. But as the dust covered wagons jolted out, one after



"This was Marcus Whitman himself"

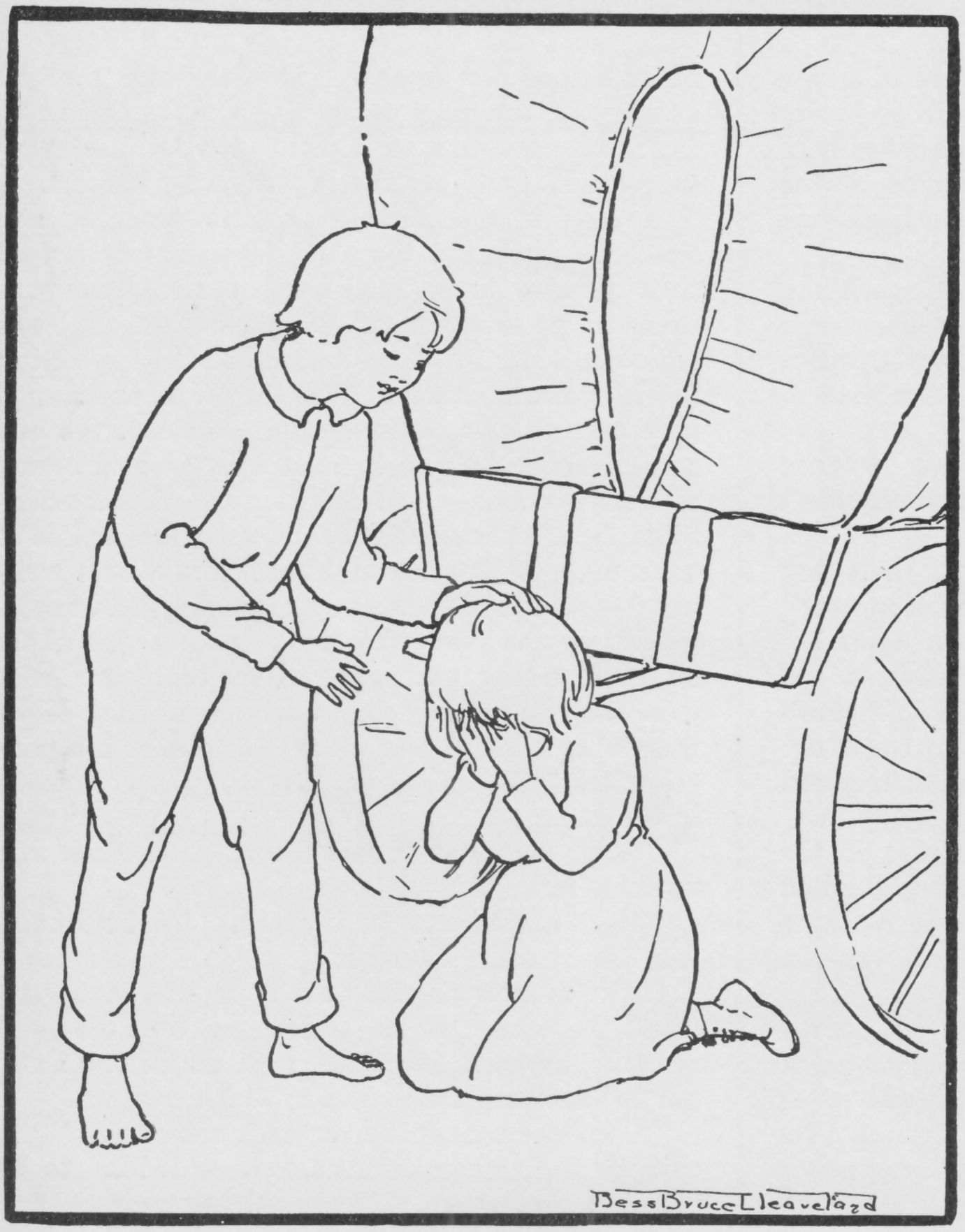
another, to take their ordered places, he did not drive the oxen forward.

"I'll go to the guide and ask him if I can take a horse and go back and look for father," he said. "Don't worry. We'll come riding up soon."

The guide consented, himself somewhat troubled. There were hostile Indians always hanging around the edge of the train and no one could tell what mischief they might do. The rest were sorry for the occupants of the one wagon left alone on the sandy plain, with only wheel-tracks and dead camp fires for company; but they could not wait for them. Every minute must be used in travel if they were to cross the mountains before the snows made them impassable. Even if a considerable number of the animals strayed they could not wait for them to be hunted up.

How still the plains became as the creaking of the wagons and the shouts of the drivers grew faint in the distance! John could hear his own heart beat. Some one had pointed out to him the direction in which his father had ridden off. There was no sign of him or of his horse. He must be behind that curious mass of rock, huge as a castle and as flat on top as a table, which rose so strangely from the level plain.

The great rock seemed very near in the clear air, but it was quite half an hour's riding before the boy rounded it. What was that dark heap on the ground? It was his father, lying oh, so still, with the patient horse, his reins tangled in



"A brotherly hand awkardly patted her hair"

Trace the picture of kind John comforting Mary and transfer design for coloring.

the huddled form on the ground, standing quietly by. The horse had stepped in a rabbit or prairie-dog hole, and had thrown his rider, who had been

"He rode along beside their ox-team"

pitched on his head on the rocks, and was unconscious. But as John dismounted and bent anxiously over him, he groaned and opened his eyes.

"Father," exclaimed John, "what can I do?"

The injured man groaned again.

"Oh, I don't know. Can you lift me on the horse?"

If old Prince had not been very gentle by nature, and a large share of the life worn out of him by the long journey, John never could have made him stand still long enough to do it. But he stood like a statue, and John tugged and strained, and the injured man helped himself as much as he could, so finally he got on the horse.

John walked beside his father and held him steady, as well as he could, leading the lame horse by the bridle, but every motion hurt. It had taken half an hour's swift riding to get to the rock, and a longer time to get the hurt man on the horse. How long it was going to take them to get to the camp there was no telling. And when they reached it there would be no one there except their one wagon and mother so weak and sick that she needed care herself!

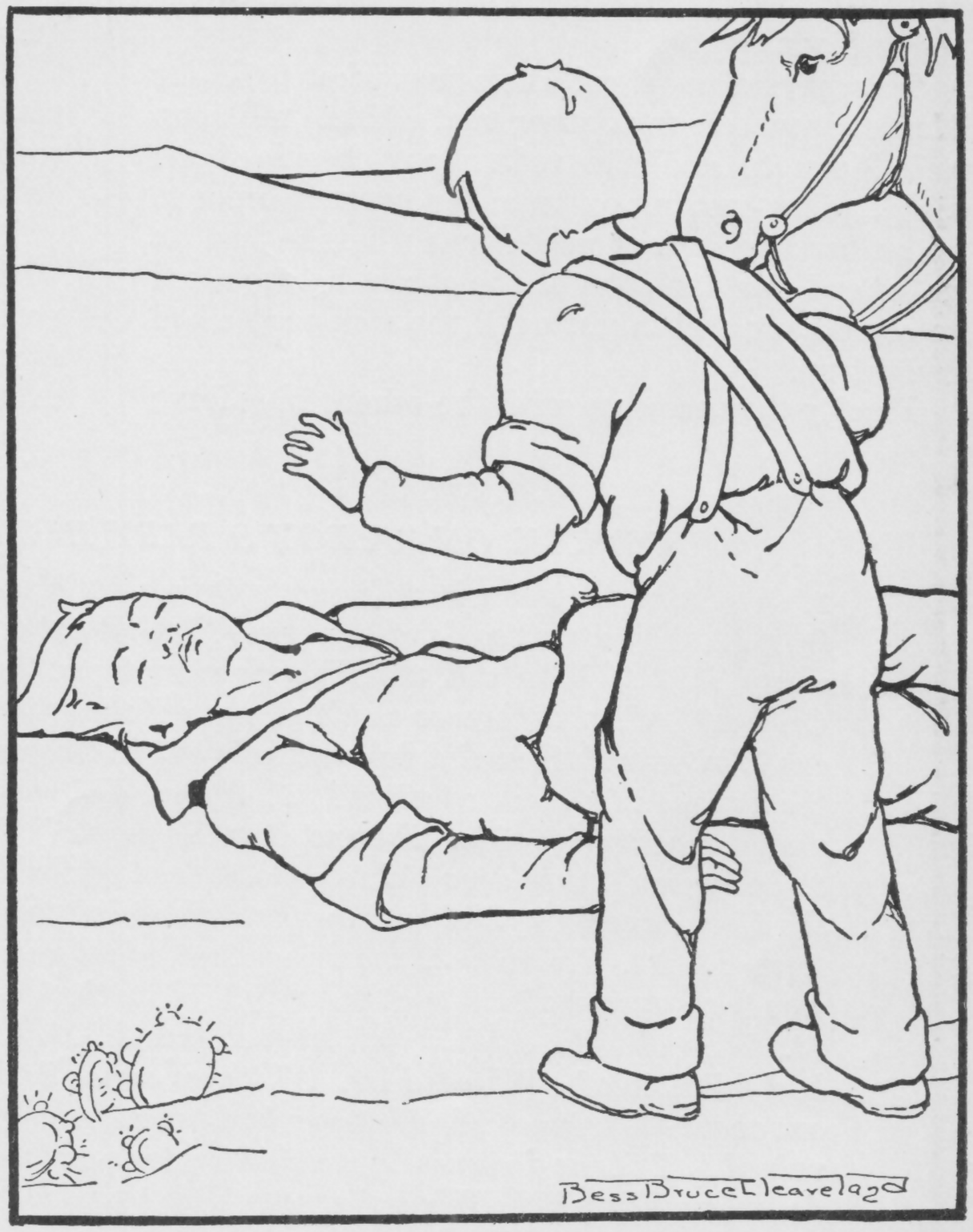
John groaned aloud. What could he do? Oh, it was cruel in the caravan to go off and leave them; and yet he knew that if they did not make all possible haste they were all likely to perish in the mountains.

A black speck appeared on the distant horizon. It was a figure on horseback. Was it an Indian! Would he shoot them! Then what would mother and Mary and the new baby do? Perish alone on the plains of slow starvation? There was great danger of it. They might drive the oxen after the others, but would they catch up with them? John's heart sank like lead.

The figure on horseback came nearer. It was not an Indian, it was a white man; John's courage bounded up again. It must be one of their neighbors or friends in the caravan come back to look for them!

Oh, how grateful he would always be to that one who had cared enough to come back when there was such distressing need for hasty progress! Which one of them could it be! The good old friend who drove five wagons ahead of them? The fellow-townsman whose wagon was placed in the camping circle just at their right? The left hand neighbor? No, it was none of these. They cared, John knew, but they could not lose the time to go back.

There was only one man in the caravan who looked like that. As the rider came nearer John could distinguish the dignified, erect figure, more imposing than all the rest, although the clothes he wore were the very roughest, shabbiest and most worn of all. And it was little wonder, for the rest were only toiling over the six months' trail for the first time, but he was returning after a winter's trip infinitely harder, and which he had undertaken at the risk of his life simply to tell our hesitating government at Washington the worth



" 'Father,' exclaimed John, 'what can I do?' "

Trace or use carbon paper to transfer this design and color with paints or crayons.

of the then unvalued Oregon which they were about to let slip from their grasp. John's heart lightened as his eyes rested on the familiar old buckskin blouse and shabby shapeless cap, the iron gray hair and kindly eyes.

For this was Marcus Whitman himself; the most occupied, care-burdened, and most important man in the caravan—leader and director of all. He had missed in the long line of wagons the one containing the sick woman and new baby, and had ridden back to help them in whatever need they might be.

Oh, how relieved the boy felt as he delivered his burden and responsibility into Whitman's hands, and, at Whitman's kindly order, climbed upon his horse to ride ahead and reassure the sick mother! For this leader of theirs was a physician as well as a missionary. He knew what to do in every case of accident or sickness, and was their tower of strength.

The emigrant train would not drive away without *him*. They were dependent upon his leadership. No one else knew all the trails and passes. No one else was able safely to direct where the caravan should ford the rivers, just where they should camp to be safest and most comfortable, and just how to make friends with the threatening Indians.

This physician-friend knew just what to do for Mother as well as for Father, and what to tell John and Mary to do. He rode along beside their single, slow-moving ox-team for hours in order to be on hand in case of need; and when he had to go ahead for the sake of the others he promised to come back each night until the sick people had caught up.

Finally they came up with the others in safety; and, guided by Whitman's skilful management, they reached Fort Hall in time to get over the mountains before winter. There they heard the same old story from the fur company and their emissaries, who were determined to discourage if possible the settlement of Oregon.

"You can't take a wagon over the mountains into Oregon! It's no use to try! The pitches are too steep and terrible!" And they showed to the troubled immigrants wagons by the dozen, agricultural implements, tools, furniture, and hundreds of useful things that those who had crossed before had left behind them.

"You will risk your lives if you try to take your wagons over!" This they told, as they had told the others before them: "Pack what you can on the backs of mules and horses and oxen. Leave everything else! It is your only chance of getting through."

But Dr. Whitman said, "Men, I have guided you this far in safety. Believe nothing you hear about not being able to get through. Stick to your wagons and your goods. They will be invaluable to you when you reach the end of your journey. I took a wagon over the mountains to Oregon six years ago."

But the children's mother queried anxiously, "Shall we leave our wagon here as they tell us?"

"No," thundered father, who under Dr. Whitman's skilful ministrations had become entirely well. "Not if Whitman says to take it. We'll do what he says!"

Their trust was not misplaced. In company with all the rest of the caravan they crossed the perilous mountains in safety, and found Oregon even a better land of promise than they had dreamed.

QUESTIONS ON "A BOY'S PART IN THE JOURNEY TO OREGON"

1. Why were the Americans going to Oregon? Where is Oregon? 2. Where had they come from? Why was it so hard a journey? 3. What dangers did they have to meet? Was it worth it? 4. Why did the English rider insist that it was impossible to take a wagon into Oregon? What difference would it make if the settlers left them behind? 5. Who was Marcus Whitman? How did he come to be out in Oregon? 6. Of what advantage was it to place the wagons in a circle at night? 7. If Dr. Whitman had been to Oregon with a wagon, why should the English rider lie about it to the people? Was the prize at stake so large as that? 8. Why would it be dreadful to go to the end of the line of wagons? 9. Why did John eat the dirty pancake? Did he show the right spirit for a pioneer? 10. How was the procession formed? 11. Tell some of the things that might have happened to John's father. 12. Why was the wagon-train in such a hurry? Was that fair to the unfortunate one who was left? 13. Why did the distant rock seem so near? 14. Can you tell what kind of a hole the horse had fallen into? Why did Dr. Whitman come all the way back? 16. What can you find out about the trip which Whitman had taken for the government? 17. Why was Oregon unvalued? Did the distance have anything to do with it? 18. What did Whitman tell John to do, when they met? What character does that show? 19. What were the emigrants told at Fort Hall? 20. Did they believe what they were told? What was the result of following Whitman's advice?

Hygiene for the Child

By ELLA M. POWERS, Joint Editor Silver-Burdett Readers; Author of "Stories of Famous Pictures," etc.

Simple Precepts to be Followed

EACH one of us has been given a beautiful present. It is the most beautiful present that any one can possibly have. It is priceless. This beautiful present is our own perfect body. It is our very own. And how are we going to care for it? Don't you think we should keep it just as perfect as we can? How many of you would like to keep it a long time? Then we must not treat it carelessly. We wish to have it do its work well.

Now our pretty and useful watch must be kept perfectly clean if we wish it to do its work well. Every part of the watch should be in order and this requires constant watchfulness. So it is with these bodies of ours. They, too, must be kept perfectly clean if we wish to do all our work well. Should we not take as good care of these bodies as we possibly can? All this wonderful machinery in our bodies requires watchfulness. Our first object should be to develop a healthy body by breathing pure air, and by keeping the body clean.

THE SKIN

The skin, if examined under a microscope, will show little mouths, or openings. These are the openings to tiny little tubes that bring waste particles and worn-out matter to the surface. Then, too, strange as it may seem, we really do some of our breathing through the skin. So you see it is necessary that we keep the skin very clean. The skin absorbs many things that come in contact with it. Some of these substances may be poisonous or foul and they should not be allowed to remain or they might pass into the body.

Did you ever hear the story of the little gold child? Once a beautiful child was covered all over with gold leaf so as to represent an angel. The child was beautiful to look upon for a short time, but very soon became ill and in a few hours died. The child died because the little openings in the skin were all closed up by the gold leaf and varnish.

Alcohol will often make a skin look red and blotched, and tobacco will give it a dingy, yellow and unhealthy appearance.

CLEAN STOMACH

Germs are such tiny little things that we cannot see them, but they are always about and always ready to engage in a fight with us. They like best places that are not clean. They are like pirates that used to roam about in their ships at sea and capture all that came near them. Once a germ-pirate said, "Here is a little boy who has been eating too much; he eats between meals; he eats at all hours of the day; he does not like good, wholesome, nourishing food as well as he likes sweet cakes and pies and candy. He eats too fast, too. His stomach is weak and tired, I know. He looks sick and I think his stomach will be a good place for me to attack."

There is a battle then between the germ-pirate and the boy. The only way the boy can win in such a battle is to drown those pirates with plenty of pure water, and breathe in the fresh air, and starve out the enemy by eating regular meals of pure and wholesome food. This course will make his stomach stronger and cleaner, and after a little time he will be able to drive away these pirates and he will not feel weak and tired and sick any more, but will be well and strong. He can surely win in all such battles if he will remember how to conquer his enemy, the germ-pirates. The best weapon in all such cases is *Cleanliness.*

THE WONDERFUL EAR

Ask the children to listen and tell you how many different sounds they can hear at the same time. They possibly will tell you that they hear the chirp of a bird, the rumble of distant wagon wheels, the whistle of a steam engine, a voice in the street, and the tapping of a pencil upon the desk.

How wonderful all this is! Just think of it! This little organ, the ear, carefully separates all these sounds and enables us not only to distinguish the different sounds but it enables us to locate them.

Every mother will realize that it would be utterly useless to enter upon an elaborate and detailed account of the structure of the ear; for little children cannot understand the intricate mechanism of the organ, but the children can be taught, simply of course, something of the ear's wonderful structure and of the sense of hearing.

Tell the little ones of the part which we can all see—the external ear, which is made of cartilage covered with skin. Our external ears are shaped as they are in order to collect sound. Ear trumpets, sometimes used by people who are deaf, are merely enlargements of the external ear to collect more of the sound waves. Ask the little people if they have ever seen horses or mules move their ears in order better to collect sounds and decide from what direction they come.

From the external ear the sounds pass through a tiny little tube about an inch long. At the end of this tube is a thin little curtain called the drum membrane, which separates the external ear from the middle ear. The drum is really the middle ear. In this little cavity are three tiny bones, very important bones indeed. They are joined together in such a manner that they make a connecting chain, reaching from the drum membrane to the other side of the drum.

The last bone fits perfectly into a tiny hole which leads into another very wonderful and curious chamber. This chamber, which is called the inner ear, is filled with a fluid, and in this watery fluid the delicate nerve of hearing is spread out.

The waves of sound, when they reach the ear, travel along through the little tube of the ear, make the drum membrane vibrate, and this sets those three tiny bones in motion. These little bones when in motion cause the membrane at the end of the inner ear to quiver, and this sets the fluid of the internal ear in motion. The waves of this fluid act directly upon the delicate nerves of hearing, which carry the exact message to the brain. The part of the inner ear that hears music is in its appearance something like a snail shell. We hear all sounds in the same way, but when the vibrations come regularly we hear musical sounds.

We have seen and learned that the ears are very delicate organs, that they are beautifully and wonderfully made and that they add much to our pleasure and happiness in life. How important it is that we give them the best of care and guard them from all injury! The slightest injury often causes deafness.

CARE OF THE EARS

1. Never allow cold winds to blow directly into your ears.
2. Never shout into another's ear.
3. Never use a pin, toothpick or sharp instrument to clean out the ear.
4. Never box or pull the ears of another.
5. Use warm water in washing the ears.
6. If an insect should enter the ear, pour in a few drops of warm oil. If not relieved, consult a physician.
7. Wherever there is deafness from any cause, consult an aurist.
8. Learn to train the ear to do its best work.

PURE AIR, REST AND SLEEP

Every time we breathe the air about us is made impure, and for this reason there should be a fresh supply all the time. If a great many people were crowded into a room which was shut up tight, they would die after a little time. Why is it that often in a crowded schoolroom the pupils will feel dull, unable to study, listless, tired and sleepy? It is because they are starving for fresh, new air. Thousands of children would be better, stronger and healthier today, if pure air was given to them. They live in close, shut rooms, sleep in rooms that have no ventilation, and rarely do they play in the open parks. We all breathe eighteen to twenty times a minute. And every time we breathe we take into our lungs about two-thirds of a pint of air and we breathe out that amount. The air we breathe out is not pure and it mixes with the air in the room. Every time we breathe we spoil as much as half a barrelful of air. If we breathe twenty times a minute we spoil ten barrels of air in one minute. How very important it is that new, fresh, pure air should always be coming in to take the place of the old air. Each one of us needs ten barrels of air every minute. How many barrels of air will that make in an hour for each of us? Six hundred barrels of pure air for each one of us every hour! And this is given to us freely to make us strong and well, if we will not shut it out.

Nothing is so free and abundant and life-giving as fresh air. We should always see that we are breathing it in its purity. The body needs food, clothing, sunshine, bathing and water; but we can live longer without any one of these than we can live without air.

THE NEED OF SLEEP

Did your canary bird ever tease you to sit up late at night? Did your kitty ever tease you to sit up and have "just one more game?" No; we never knew a kitty or a bird or any animal to tease to sit up late. All are ready to go to sleep when the time comes—all except some little boys and girls, who perhaps are not quite wise enough to know the great importance of hours that are made for sleep. Even some of the flowers go to sleep at night and always at the same time. During the day we run and play, walk, talk and laugh; and every motion, every movement of a muscle, every action of the brain, causes some little particle to wear out. It is when we sleep that a little army of repairers comes and mends up all the worn-out,

weak places and makes them strong and well. Of course we all want to grow, we hope to be strong, and we would feel badly if we were not able to run about, walk, jump and play. Yet, in order to be strong and do all these things, it is necessary that we sleep. If we do not sleep we become weak and feeble; if we do not sleep we are tired and we cannot think well. We cannot seem to learn about the wonderful things in this world if we do not sleep; for we cannot study easily, nor can we well remember what we read. The little sleep-repairers always put the brain and muscles in good order for us.

How long should we sleep? An active little boy or girl about six or seven years old should sleep twelve hours every night. That is half a day, you may say. So it is. How much sleep do you think we should take in a lifetime of seventy-five years? Let us suppose we sleep eight hours a day on the average, during these seventy-five years. How many days are there in a year? 365 times 8 will make 2920 hours in one year. In 75 years we shall sleep 219,000 hours.

CLEAN CLOTHING

Every year the horse sheds his old coat; the bird moults and has a new coat of feathers; the snakes shed their old skins, and, in fact, all the animals have new, fresh clothes. Then every day these animals wash their clothes that they may be perfectly clean and fresh. The little canary bird sings all the sweeter for having had his morning bath and for knowing that his coat is clean and fresh. Every day we, too, should see that our clothing is well brushed and perfectly clean.

CLEAN BRAIN

There are other enemies of ours that are always lurking about ready to take us as prisoners. These other enemies are called bad habits. Now, if you possessed one of the most costly and valuable presents in this world, you would place a guard over it. That is, you would feel that you must have some one to watch over it constantly that no harm could come to the beautiful gift. But when our present was given to us, there was a guard, or watchman, given with the present. This faithful watchman is the brain. We must treat this wonderful watchman well, so that he will keep strong and healthy and can fight against these enemies called bad habits. Pure thoughts, kind words and loving deeds keep this brain-sentinel in the best condition to fight bad habits. Every impure thought, unkind word, dishonest act and bad habit makes an ugly scar upon the brain and its power becomes weakened. If these are repeated many times then the great army of bad habits comes upon us and gains possession. Try as hard as we can, we cannot drive off the enemy. The best weapons to put in the possession of our watchman are pure thoughts, kind deeds and loving acts. These will make the brain strong, healthy and victorious.

OUR EYES

In the house which God has made for us—our beautiful, wonderful body—there are placed just two wonderful windows, which are round. With these two round windows we can see all that is necessary for us to see. It has been said that nine-tenths of all our sense-knowledge comes to us through these two little wonderful, round windows. We call our windows *eyes*, and we all know that sight is a precious gift.

We should not use our eyes in close work, or read, between sundown and dark. These wonderful eyes adjust themselves always to all conditions and varying distances, and different degrees of light. If we try to read at twilight, we compel the eye—our best and most faithful servant—to work too hard. We compel it to strain itself; and, if this is continued, great injury will result. We should not read while walking or riding, for this, too, strains the eyes, as they are constantly making the attempt to adjust themselves to the changing and varying focus. We should not read when the sun shines upon the printed page. This is very dangerous. It weakens the eyes; the little nerves, veins and capillaries become greatly strained. We should not rub the eyes too often nor too hard, especially when a bit of dust or a cinder gets into the eye or on the inner surface of the eyelid. With a clean handkerchief carefully wipe the eyeball or wash it out by carefully bathing the eye. If not successful, consult a physician, before resorting to any experiments. To help the eyes to grow strong, we must observe these rules for their preservation.

THE CARE OF THE TEETH

In the first place, I want to prove to you that toothache is unnecessary. Then I will show you that because a tooth has ached is not sufficient reason for having it pulled, because the dentist can, even after the tooth has ached, put medicine into it that will prevent further pain, and moreover, preserve the tooth for many years of valuable service.

We need every one of our teeth; we need them every day; we need them three times a day. As one little boy has very aptly expressed it, we need them "every time we put our feet under the table." It has been said that the loss of one of the large teeth in the back of the mouth means the cutting off of a year from the end of a person's life. Let us see how the teeth play such an important part in the preservation or loss of our health.

The tooth is composed of three parts. The top is a layer of very hard material called enamel that forms a cap over the rest of the tooth, just as a thimble sets over the end of the finger. It takes decay quite a long time to make its way through

this hard outer covering. Under the enamel is a second layer known as dentine. This is a much softer material and when decay reaches here it progresses very rapidly.

Lying in the center of the tooth is the nerve or pulp. This is made up of nerve fibers which come into the tooth through the root. It is the portion that contains all the life of the tooth. It is also that part from which comes the aching.

The two sets of teeth coming together in the mouth form a sort of mill, the purpose of which is to grind the food and prepare it for the stomach. From 250 to 400 pounds pressure is brought upon the food in chewing, thereby forcing bits of food into the spaces between the teeth. If allowed to remain there several hours these bits of food begin to decay. Trouble in several different ways is going to result.

First, decaying materials are poisonous. If you ate decayed meats or vegetables, you would expect them to make you sick. Yet if teeth are unclean, every time you swallow the saliva carries from between the teeth particles of that old food. Every bit of the clean food taken into the mouth to chew is mixed with those decayed particles before going to the stomach. You can easily understand that constant swallowing of this poisonous matter from lodging places between the teeth will poison the system and bring about sickness. This is one of the first troubles likely to result from improper care of the teeth.

Decay starts in the tooth this way. When the small particles of food have become lodged in the spaces between the teeth, they begin to decay after several hours. In decaying, they produce an acid. This will slowly eat a hole through the outer protecting layer which we know as enamel. Then the second layer, the dentine, is reached. Now, at this time, when decay has just entered the dentine, the tooth will become slightly sensitive to the touch of hot coffee, cold water or other things which would have a tendency to irritate the third section—the nerve or pulp. While there is no feeling in the dentine itself, running through it there are delicate little tubes connecting the enamel with the nerve. Once decay touches these little tubes, they act as telephones to convey the message to the nerve that the tooth is decaying and needs attention. You then feel the nerve "jump." That is nature's way of telling you to see the dentist. If you go to him at this time he can cut out the decayed material, and fill the tooth without going close enough to the nerve to cause very much pain.

Is it not plain to us all that the sensible way to guard against toothache is to keep decay from attacking the protecting layer of enamel? Acids start the decay. Those acids come from decaying food materials around and between the teeth. By keeping the teeth carefully brushed, food particles will not remain there to decay, and then those decay-causing acids cannot be formed; so there will be nothing to bring about toothache.

Now the two times a day when it is necessary to brush your teeth are morning and night. There is no objection to brushing them after each meal if you wish to do so, but twice a day is really sufficient if you are very careful to brush thoroughly those two times. The food particles should be removed, however, after each meal, with floss silk. If you have not the floss, use soft quill toothpicks.

Occasionally there will be small places between the teeth not reached with your toothbrush, and decay may start there. So go to the dentist's every six months. He will thoroughly clean those places.

If you will carry out these few directions I will guarantee you several things. First, you will be stronger and healthier. You will find that you have greater capacity for learning. You will grow up stronger, healthier men and women.

Remember, clean teeth never decay and good teeth mean good health.

Questions any Bright Child Might Ask

By MATTHIAS R. HEILIG, Author of "The Story of Language," etc.

What is the sun?

The sun, from which we derive all our light and warmth, is a huge gaseous sphere, 866,000 miles in diameter. Its density is great,—it would take about 330,000 planets like our own to make up its mass. We can get some faint idea of its terrific heat by observing how it is able to heat this world of ours though 93,000,000 miles away from it. If we could take a thermometer to the sun it would run up to 10,000°F. Notwithstanding its great mass the sun is not solid, but atmospheric. Its outer surface is the scene of continuous and prodigious storms or swift currents tumultuously tearing about in all directions. The chief layers of gas on the sun are: the photosphere, an unbroken mass of incandescent cloud a few thousand miles thick; just outside this the reversing layer, a vaporous atmosphere, about one thousand miles thick; the chromosphere (color-sphere) principally hydrogen, calcium and helium, about eight thousand miles thick. When the sun is totally eclipsed it is possible to observe another, a quasi-atmosphere, called the corona. It is an irregular, pearly, radiant halo which shoots its rays millions of miles into space. Its nature is obscure, but it is in part an electro-magnetic phenomenon. The heat of the sun is explained by the theory of a constant slow contraction upon itself by its own gravity, which means that within a few billions of billions of years the sun will have cooled off.

What is the moon?

The moon is the nearest celestial body to the earth. Indeed the moon belongs to the earth, and just as we go whirling around the sun the moon goes whirling around the earth. If you look at the moon through a strong telescope it seems to resemble an orange. In former ages the moon, like all the spheres, was molten hot; and in cooling, the interior heat frequently broke through the surface in great volcanoes, like steam bubbles in hot mush. The moon always appears the same because it always has the same side toward the earth,—in other words it turns around on its axis once in 27⅓ days, exactly the time it takes it to go around the earth. No evidence of there being any atmosphere on the moon has ever been discovered. The moon must therefore be extremely cold, and if any water is there it must exist as ice. We often say of a bright moonlight night that it is as "bright as day." But it would take 600,000 moons at their brightest to equal the sun. The moon gives off no appreciable heat, and the light it gives is of course the reflection of the sun's light. The moon is 2,160 miles in diameter, and it would take eighty-one moons of its size to equal the mass of the earth. It is 239,000 miles away.

What is an eclipse of the sun?—of the moon?

In the course of its journeys around the earth the moon frequently gets exactly between the sun and the earth, and while much smaller than the sun she is so much nearer that her body just manages to completely cover the sun,—that is, in case of a "total" eclipse. If the moon does not pass exactly through the straight line between us and the sun, but a little to one side, it is a "partial" eclipse of the sun. A sun eclipse should never be looked at with the naked eye. Take a piece of common window glass and smoke both sides by holding it in the flame of a candle, and look through the smoked glass. When the moon gets exactly opposite the sun, with respect to the earth, that is, when the earth is exactly between the sun and moon, we have an eclipse of the moon, because the earth is just large enough to make a shadow which covers the moon.

How fast does the light from the sun travel?

Light from the sun or from any luminous object travels at the inconceivable rate of 186,000 miles per second. It is said to move in waves through ether which fills all space. A ray of light travels with absolute straightness.

How many planets are there?—how many stars?

A planet is one of the bodies which revolve around our sun. There are eight, and in order of their distance from the sun are: Mercury, 36 million miles; Venus, 67 million miles; Earth, 93 million miles; Mars, 141 million miles; Jupiter, 483 million

miles; Saturn, 886 million miles; Uranus, 1780 million miles; Neptune, 2790 million miles. Between Mars and Jupiter should be mentioned the Asteroids. These are about 700 small spheres moving in the same orbit. The first to be discovered was Ceres, found by Piazzi of Palermo, January 1, 1801. It is believed that the largest of these planetoids is not over 450 miles in diameter.

The number of stars visible through the strongest telescope is about 100,000,000. But beside these are innumerable dark stars. Some astronomers think they outnumber the shining ones. The stars are burning spheres like our sun, and most of them are supposed to be the center of a solar system like our own. They are at an almost incomprehensible distance from the earth. Astronomers speak of their distance in terms of "light-years." Light travels 186,000 miles per second, and almost six trillions of miles in a year. A "light-year" represents about six trillions of miles. The nearest fixed star, Alpha Centauri, is four light-years away. That is, it takes a ray of light from Alpha Centauri four years to reach us, for it is 24 trillion miles away. Polaris is 70 and Castor 120 light-years from us.

Are any of the planets inhabited?

It is pleasant to imagine that some other planets besides the earth are inhabited, but there is no substantial proof for or against the supposition. It is certain that the atmospheric and other conditions are quite favorable to life on several of the planets; and it is natural for us to wonder why such conditions should be unless they have some purpose. Astronomers are still disputing the claim that Mars shows signs of the activity of intelligent beings living upon it. Certain lines crossing the warm zones of this little planet drawn in geometric precision have been taken to be canals. It is plausible that if there are intelligent beings on Mars they have used this irrigation method to bring water from the north and south zones where, and where only, water seems (by the white and glittering appearance of these polar regions) to abound. Jupiter, Saturn, Uranus, and Neptune are as yet unready for life because of their great internal heat. Venus, Mars and the Galilean moons of Jupiter have a constitution and temperature hospitable to life. Mercury and others like our moon have passed the life-supporting age;—are, so to speak, dried up with old age.

What are comets? and when was the largest seen?

The modern notion of a comet is that it is a vast collection of loose particles varying from the size of a grain of sand to that of a house, whirling about each other, the lighter particles falling behind, and the whole mass from a few hundred cubic miles to many thousand cubic miles careering around the sun in gigantic elliptical orbits. As a comet approaches the sun it is seen to begin to glow, perhaps with a self-luminosity. The peculiarity of the comet is that it has a tail or tails, which sometimes trail after the head or nucleus for many millions of miles, always on the side away from the sun. Encke's comet, the nearest to the sun, travels around the sun in 3⅓ years; Halley's comet takes 76 years to describe its orbit. In 1843 many people thought the end of the world had come when a magnificent comet which spanned the whole arch from horizon to horizon came into view. This comet approached nearest the sun of all known comets. It was so brilliant that at night one could read by its light, and when it was nearest the sun it could be seen with the naked eye. This splendid visitor will not return for 500 years. Its velocity as it circled the sun was more than one and a quarter million miles per hour. Its tail was 150 million miles long. Comets' tails are supposed to be rarefied gas, made luminous by electrical currents.

What is the Milky Way?

On a clear night when the moon is not shining the Milky Way can plainly be seen spanning the heavens like a narrow and rather irregular cloud faintly illuminated. It is a gigantic stellar cluster, extending all the way around the sky, so that we appear to be in the center of it. It is made up of countless stars, each of them comparable to our sun in size, but appearing faint and indistinct because of its immense distance from the earth.

What are "shooting stars"?

There are innumerable large and small objects floating about in space with no particular object in view. They are the remnants of exploded globes or fragments of detached satellites, and occasionally they come within the radius of the earth's attraction. They increase their speed toward the earth more and more as they draw nearer; and when they finally reach the atmosphere, which surrounds the earth to a thickness of about 100 miles, the heat caused by the friction in rushing through the air ignites them. Few reach the earth save as ashes, though now and then a "meteorite," usually of stone or iron, is found. There are interesting collections of meteorites in the museums of Washington, New York and Chicago.

Does the sun really rise and set?

The earth is whirling around the sun, and makes the circuit in three-hundred-sixty-five and a fraction days. But as it goes around its orbit it also revolves on its axis, the ends of which we call the North and South Poles. Each revolution takes twenty-four hours. Held down to the earth as we are by the force of gravity, there is only one "up," and there is only one "down" to us. "Up" is the direction away from the center of the earth. "Down" is the direction toward the center of the

earth. If "up" were always in the direction of the sun, and it seemed thus to us, we would feel that we were walking with our heads down at night, like the flies on the ceiling. But then we would also see the "sunrise" as it really is, that is, our own world's turning us around into the light of the sun. Likewise the "sunset" means that the earth is turning us out of the light of the sun.

How fast does the earth revolve on its axis?

The earth turns from west to east, making one revolution in 24 hours. 24 hours is equal to 86,400 seconds. The circumference of the earth at the equator is about 24,899 miles. Dividing 24,899 into 86,400 we obtain 3.47 plus, the number of seconds it takes an object on the equator to travel one mile. If the earth should suddenly stop revolving, things on the earth, except those near the poles, would certainly experience a big upsetting. Imagine what would result if a train of cars were going a mile in 3.47 seconds and should suddenly be stopped.

What is the Aurora Borealis?

Scientists are rather vague in their definitions of the "Northern Lights." It is some sort of electrical phenomenon, thought to be related to the spots on the sun; and in some way caused by the presence of vast electrical currents through rarefied gases in the upper air of the frigid zones. They appear sometimes as a pink, light blue or greenish-yellow blush along the northern horizon, or in streamers shooting toward the zenith, or in arches of light which come and go. In the southern hemisphere the lights appearing in the south are called the Aurora Australis.

What is a mirage?

A mirage is the very astonishing effect of a very simple cause. In certain localities, especially dry and hot localities, the density of the air near the surface becomes diminished by the radiation of great heat from the earth's surface. When two layers of air of different densities touch, the plane of contact acts as a mirror. Moreover, rays of light passing from one layer into another of different density are bent, or refracted. Thus it happens that distant objects from which rays of light are reflected appearing in the direction in which the rays of reflected and refracted light enter the eye, seem to be suspended in the air or inverted against the horizon. Very often in the desert the reflection of a cloud looks so much like a lake whose surface is gently disturbed by the breezes that even experienced travelers are deceived.

How high are the clouds?

The average height of clouds is estimated to be about 2½ miles. However, when they are thick and heavy they often come close enough to brush the tops of the mountains and even the high hills; while some of the light, fluffy tufts of clouds are frequently five or six miles high.

What is wind?

Wind is air in motion. It is caused by the unequal heating of the lower strata of air, which ascend, thus tending to create a vacuum into which the surrounding air rushes. But the subject is by no means so simple as this statement seems to make it. The causes of the great variety in the weather are very obscure. Difference of atmospheric density enters into the problem, as does also the arrangement of land and water on the earth's surface. In some parts of the earth there is a certain uniformity in the weather; and across the tropical oceans the trade winds blow regularly. Wind storms are most violent in the tropics and least so in the polar regions. But for the winds, which are practically always blowing, we could have no rain, for the clouds would never float over the land from the seas by any power of their own. Life in large centers of population would be unbearable, particularly in the summer, were it not for the wind, faint or strong, which carries off the dust, gas, bad air, poisonous vapors, smoke and heat. Before steam and electrical ships were invented, commerce over the seas would have been impossible; and America might not be discovered to this day had not the wind blown the spreading sails of the discoverer's ships.

What makes some clouds rain, others not?

Clouds are by no means so dense and compact as they appear. They are made up of a vapor which is composed of innumerable small globules of moisture, hollow, and so light they easily float in the air. The air can support a certain amount or density of this vapor, but it can become too dense, and when it reaches the point of saturation the moisture is dropped. The warmer the air the more moisture it can carry. When therefore a mass of clouds drifts into a colder area the particles of vapor cling together and thus grow too large and heavy to float in the air, and drop. Sometimes great masses of dark clouds roll over the skies and never a drop falls, because the temperature up there is uniform and the cloud area has not reached the point of saturation.

What is snow? Hail? Fog? Dew? Frost?

Even in summer the clouds are in a very cold stratum of air, because they are so high, and up in the rarefied air the temperature is not raised very much by the radiation of heat from the sun-warmed surface of the earth. In winter, when a colder body of air strikes a moisture-laden body of air, the vapor is condensed and falls; but it freezes as it falls; and the drops are changed by the magic of "Jack Frost" into regularly formed crystals of ice. Snow is colorless ice, but a great mass of flakes together perfectly reflects the white light

and appears to us a perfect white. Hail is seen to be globular masses of ice and snow, sometimes in layers. It is supposed that hail is formed when the raindrops or snowflakes are blown up into colder strata of air that are whirling violently. As the frozen drop enlarges, it falls, perhaps to meet with warmer currents and is forced up again into the whirlpool. It may thus be whirled several times before it at length falls to the ground. Hailstones are occasionally found as large as eggs. Fog is a cloud that lies upon the earth; but instead of coming from the seas, it is formed from the dampness of the ground or is occasioned by the cooling off of the lower air when it is partly saturated with moisture. It has been found that no condensation can occur without a nucleus. The particles of dust in the atmosphere provide the nucleus around which tiny hollow globules of moisture build themselves. The Nova Scotia fogs are caused by the warm currents of air which blow over the cold water. The great amount of dust in London probably has much to do with the great density of the fogs there. The worst fog on record occurred in London in 1879. It lasted from November to the next February, and caused thousands of deaths. When the sun has set, the surface of the ground rapidly cools off. The air, however, retains its warmth longer, and has always considerable moisture invisibly suspended in it. When, then, the warm, moisture-laden air touches the grass or ground, which is cool, the moisture is condensed, and is deposited in tiny drops. Several tiny drops near each other run together, and when we look at the dew in the morning it seems as though it had rained in the night. Frost is nothing more than dew frozen. Dew or frost will not form when the sky is overcast with clouds, because the clouds act as a blanket to check the radiation of the earth's heat. On windy nights the motion of warm air does not allow it to deposit its moisture.

What causes the rainbow?

When rays of light pass from a medium of one density into a medium of another they are bent. This is called "refraction." But in the bending, the seven different colored rays which make up white light do not bend equally. The violet bends most, the indigo next, and thus in order the blue, green, orange, and least of all, the red. This can be tested with a glass prism. Now a drop of water is at once a prism and a mirror. A ray of light entering one side is bent toward the center of the drop, and when it reaches the surface is reflected back. Upon passing out of the drop it is still more bent and its rays of seven colors separated. Some morning hold a dewdrop that is on a blade of grass in the sunlight, with the sun back of you. Move the drop up and down and you will notice that the tiny gleam of light on it assumes the different colors of the rainbow. The rainbow is seen when the sun is shining upon a shower. The sun must necessarily be rather low, so that most rainbows are seen toward evening, and rarely in the morning. It is in a bow, because the rays of light from the sun must form just the right angle with the drops of rain to be reflected to the beholder's eye. Therefore, strictly speaking, no two people see the same rainbow.

What is lightning?

Lightning is an electrical phenomenon caused by the contact of positive and negative fields of electrical energy. The positive rushes toward the negative. As the storm clouds roll and churn in the wind, different clouds and strata of air are brought together, or a cloud full of positive energy may discharge its fire into the earth. Lightning is usually exceedingly hot. It has been known to melt the nails that held in place the lightning-rod which was struck. On the other hand, men have had their clothes torn from them, even to their shoes, while not a hair on their body was singed by the flash. Lightning follows the path of least resistance. That is why it takes such a jagged, crooked course. Its motion is so rapid that it really drives the air before it. And since the air offers a certain resistance, it is easier to glide off at an angle. Lightning makes as its targets the lofty eminences which pour off the opposite electricity from the earth into the air. It is safer therefore during a storm to be out in the open than to seek shelter under a tree.

What is thunder?

Thunder is the clap of the atmosphere as it rushes together after the lightning has pushed it aside or burned it. There is an immense pressure on every side forcing the air back into the vacuum created by the lightning, and when the walls of air come together the shock sets up a violent vibration of sound waves. The noise begins immediately after the flash begins, but as light travels almost instantaneously with relation to things on the earth, and as sound travels only 1100 feet per second, it is necessarily about five seconds after a flash one mile away that we hear the report.

What is an echo?

If you throw a rubber ball against a building it will rebound toward you. So too, sound rebounds. The ear can detect the returning sound or echo of a sharp, quick sound when the reflecting surface is only 55 feet away. At 350 feet words of three syllables are easily heard in the echo.

What are volcanoes?

Volcanoes are openings in the earth's crust surrounded by ejected materials which form sometimes a high mountain, out of which molten elements are or have at one time been forced by the exploding or expanding heat deep in the earth.

They are found usually near the seacoasts where it is natural that the water is more likely to find its way through the crevices and fissures down into the heated interior, and the water turning to steam rends things asunder in its expansion. Most of the volcanic mountains are inactive—the volcanoes are extinct. But occasionally one thought to be quite extinct will become active again. Volcanic eruptions are usually preceded by rumblings in the earth and by earthquakes. Warning is often given by the smoke which pours out of the opening, called the crater, for days, sometimes, before the explosive ejection of ashes, stone, melted rock and lava. Following are some of the great historic volcanoes: Aconcagua, Chile, 23,083 feet high; Etna, Sicily, 10,738 feet; Fujiyama, Japan, 12,390 feet; Pelee, Martinique in the West Indies, 4,300 feet; Popocatepetl, Mexico, 17,520 feet; Skaptar Jokull, Iceland, whose lava streams flowed 50 miles (1783); Krakatoa, Strait of Sunda, which sent dust 17 miles into the air (1883) and caused a tidal wave which killed 36,500 people; Izalco, Salvador, C. A. 2,500 feet, continuously active since 1770. Other constantly active volcanoes are Stromboli, Lipari Islands, 3,090 feet, active since the time of Homer; Sangay in the Andes of Quito; Cotopaxi, Ecuador, 19,613 feet; Sion in the Moluccas and Tofoa in the Friendly Islands. Vesuvius, Italy, 4,260 feet is one of the best known volcanoes. It has frequently become violently active and destructive, but for long periods continues in a state of moderate activity and then becomes quiet or dormant for a few weeks, or months, or years.

How deep are the oceans?

The greatest depth sounded in the Atlantic Ocean was found north of the Virgin Islands, in the West Indies, where a depth of 4,561 fathoms (or 5.18 miles) was found. The Pacific Ocean is both larger and deeper. Soundings between the Friendly Islands and New Zealand show a depth of 5,155 fathoms or nearly six miles.

What makes different colors?

The different elements and combinations of elements have different powers of assimilating or reflecting light; and light, which is white, is separated into its component colors as it strikes and rebounds from objects. Those colors which are reflected from the object give it its color. Thus when we look at a red rose we see the red rays, originally from the sun, which alone are reflected from its petals,—the other six primary colors being absorbed.

What is fire? and what is rust?

Fire is combustion, and combustion is a chemical process whose chief characteristics are the production of heat and light and the liberating of gases. Fire is the most common form of combustion, in which the oxygen of the air combines with the carbon and hydrogen and other elements in wood, coal, fats, oils, etc. The ancients and some uncivilized tribes today produce fire by friction or by striking flint against iron pyrites and catching the sparks in their tinder. Heat is energy; and all energy gives rise to, or is converted into heat. As the heat rises to a sufficiently high temperature combustion begins. Fire, however, simply changes the chemical position of things, it does not annihilate anything. Thus a stick is ignited and burns and apparently only a mass of gray and black and white ashes remains. But the carbon once there has been released in the form of carbonic gas, and the water has disappeared into the air as steam.

Rust and combustion are both chemical change; the former is slow, the latter rapid. Rusting is due to chemical reaction of iron with the moisture in the air. It combines with the oxygen and sets free the hydrogen, which forms ammonia with the nitrogen of the air.

What shall we do when our clothes are a-fire?

This is a very serious situation, and in all such cases we must keep our presence of mind. The first thing to do is to *lie down* and roll. If possible roll yourself up in a rug or blanket or carpet to smother the flame. If you stand, there is danger of inhaling the flame, and it doesn't take much of that to kill you. *Do not run;* for that only fans and increases the flames. If there is nothing with which to wrap yourself and no water at hand, lie down and pull the burning garments off as fast as you can. If you can't get your clothes off pound the flame out with your hands, even if it does burn your hands somewhat. But by all means avoid breathing the fumes and flames.

Why does a draught make the fire in the range burn hotter?

Since fire is the combustion or rapid combining of certain elements with oxygen or chlorin or a few other elements, the amount of fire in the grate of the range will depend upon the amount of oxygen that is allowed to get at the coal or wood. All the oxygen it can get must come from the air; therefore the more air that is allowed to pass up through the burning coal the more the fire will burn.

Why will water freezing in a jug break it?

It is a law that heat expands and cold contracts. Water obeys this law only up to a certain point. It contracts until the temperature sinks to about 40° F. then it begins to expand, and at 32° F. it expands abruptly into crystals which occupy more space than the original water. The ice refuses to be restricted in its area, therefore unless you do not value the jug do not stand it out of doors on a freezing night with water in it.

What are icebergs?

Icebergs are great floating masses of ice, the source of which is usually the glaciers of the frigid

zones. A glacier is a slowly moving river of ice, which as it reaches the sea breaks up into huge masses of ice. Three-fourths of an iceberg is under water. The reason that ice can float at all is that it occupies more space than the original water of which it is composed, but of course does not weigh more than the original water, though it displaces more water than its own bulk weighs.

Why does a cork float, and a balloon ascend?

Any object which when submerged in water displaces a quantity of water which weighs more than the submerged object weighs when out of water, will be forced to the surface of the water, and a portion,—perhaps a very small portion—will be protruded above the level of the water. The reason for this can be explained thus: Suppose that we have a tank of water ten inches deep, in the middle of which is suspended by a string from below a cork one cubic inch in dimension. It must be remembered that the particles of water move over each other without friction, and in a body of water the force of pressure from weight is equal in every direction. Now imagine the water in this tank divided into perpendicular columns whose bases are each one square inch, and height, of course, ten inches. The column containing the cork would weigh less than any other column. That portion of the cork column from the bottom of the cork to the surface of the water would not be heavy enough to withstand the pressure upward against it caused by the pressure coming in all directions from the other columns. The cork column therefore is pushed upward,—"squeezed" upward,—and the particles of water rush under the cork until the weight of the column is the same as the other columns. The same explanation applies to the balloon in the air, the balloon being filled with a gas lighter than air.

How do we hear?

Hearing is one of the wonderful adaptations of nature to human requirements. It depends upon three things, the power and ability of things to vibrate, the elasticity or wave-making character of the atmosphere, and the remarkable receptacle for the waves in the ear. All sound, from the chirp of a bird to the roar of thunder, is vibration of air. When a bell is hit with its hammer the metal is set vibrating and communicates its motion to the air, and the sound goes out in concentric waves in all directions from the bell. As the waves of sound reach and enter the ear they set in vibration the thin membrane called the ear drum or tympanum. The vibrations are then communicated to three little bones in the inner ear, the malleus or hammer, the incus or anvil and the stapes or stirrup. This last named vibrates the fluid in a canal called the membranous labyrinth, in the walls of which are the auditory nerves which communicate the sound, or cause the sensation of sound in the brain.

How does electricity make light?

Electricity is generated, or produced, by dynamos, propelled by steam or water power. The incandescent bulb is of glass, containing a vacuum, in which is fastened a fine filament of carbon (or tungsten). The filament offers considerable resistance to the passage of the current, and this energy is transformed into heat. When sufficiently heated, the filament becomes incandescent and emits light. The arc light is composed of two sticks of carbon, brought near to one another but without touching. The resistance of the atmosphere to the passage of the current from carbon to carbon generates heat, which renders the carbon incandescent. The positive carbon is distinguished by a crater-like form, and the negative by a pointed form. Both carbons are incandescent at their tips, and from them considerable light is emitted, although about eighty-five per cent of the total amount comes from the crater just mentioned. The arc, or space between the carbons, furnishes only about five per cent, while the remaining ten per cent comes from the negative carbon.

Why is nobody killed by the shooting stars which fall to the earth?

The shooting stars, or aerolites, have been known from earliest times. Livy, the Roman historian, records a shower of meteoric stones near Rome, about 654 B. C. A shower of stones that fell in France April 6, 1803, was accurately reported. Within an elliptical area of seven miles by three, the number of stones that fell could not be less than two or three thousand. The largest were seventeen pounds in weight. There are hundreds of other instances on record. These stones are uniformly composed of nickel-iron, which occurs in various proportions.

The generally received hypothesis today as to the origin of aerolites is that they are detached bodies, in interplanetary space, and that they exist in every variety of form and condition. The intersection of the earth's orbit by such a swarm of meteoric bodies would account for the periodic or sporadic nature of the phenomenon. Their luminosity is due to the friction encountered from the atmosphere, which they traverse at an estimated velocity of 35,000 feet per second, at the moment of encountering the earth.

In the majority of cases this friction is sufficient to generate enough heat to consume the aerolite entirely, so that it reaches the earth in impalpable dust.

Why is sea water green or blue?

When viewed through layers of considerable height, pure water is seen to possess a bluish tinge. Soft drinkable waters have a brownish tinge. Water containing traces of calcium carbonate in suspension appears opaque if viewed through a sufficiently high column; but the opacity is gradu-

ally destroyed if carbonic acid gas is passed into the water, the color of the latter changing gradually through brown, yellow, and green, to blue.

On the strength of this observation, it has been suggested that the colors of natural waters may be due in part to the various amounts of carbonic acid contained in them. Sea water becomes a deep blue, changing to sky-blue when it reflects the light of the clear sky, and to gray or almost black under heavy storm clouds. Along the shore it may assume a brown or yellowish color from suspended mud, while in shallow portions or near the coast it is green. In shallow portions it is a matter beyond doubt that the nature and color of the bottom affect the color of the water.

What keeps a top from falling?

When a top of symmetrical shape is rotated, the peg or point on which it rotates is the end of the axis of rotation, and of the axis of symmetry as well. It is evident therefore, that the particles composing the mass of the top may be grouped in symmetrical pairs whose movement about the fixed point represented by the peg of the top will be symmetrical with respect to the axis of rotation. In the ordinary top, the weight acting downward at the center of mass produces a horizontal impulse—or "moment;" the point of the top thus begins to move horizontally, causing a movement of "precession." This forward movement serves to counterbalance, with the gravity of the mass, the moment of rotation, and the top remains poised. When the rotation slackens, the horizontal precession ceases, and the gravity of the mass is then sufficient to overbalance the top, which falls.

Why does hair turn gray?

Under a microscope a hair shaft is seen to be made up of three parts; a central medulla or pith, a cortex, and an outer cuticle. The pith is made up of a loose, dry tissue, with large intercellular spaces filled with air; the cortex is outside of the medulla, and is a dense layer containing the pigment, or coloring matter; the cuticle is the covering of the hair, and may be smooth, or rough and ornamented with scales and other projections. Each hair is said to live from two or four years, and when shed, may be replaced by another from the same follicle or hair-root, unless the follicle is diseased. The grayness of hair in advanced life results from a deficient secretion of pigment and perhaps an increase of air in the medulla or pith of the hair.

Will diamonds burn?

The diamond is composed of pure carbon in crystalline form, transparent, and of great hardness. The diamond is unaffected by any liquid, and infusible at the highest attainable temperature. It gradually burns away before the oxy-hydrogen blowpipe, or in the electric furnace, or when it is heated red hot and plunged into an atmosphere of oxygen, carbonic acid then being produced. Exposed to the intense heat of the voltaic arc, the diamond becomes converted into graphite.

How is gasoline made?

Gasoline is the lightest of the volatile liquids contained in crude petroleum, and is the first and highest distillant of that substance. Gasoline is an arbitrary name first given to certain specific gravities of naphtha used for making illuminating gas in house equipment. Specifically, all gasoline is naphtha in the manufacturing industry. The specific gravity ranges from .58 to .90, water being rated as 1. or unity. Crude petroleum yields about 15 per cent gasoline (naptha) for all gravities. For a long time gasoline was considered a waste product, in the manufacture of kerosene. Representing the lightest portion of crude oil, gasoline is extracted by distillation. The petroleum is placed in a still or retort, and the distillant is cooled in a copper "worm," leading to a receiver with glass sides. From the bottom of the receiver a number of pipes lead to different storage tanks, each pipe having a cut-off valve to regulate the flow of the varying gravities to their respective tanks.

How far will a stone sink in the deepest parts of the ocean?

Anything which sinks in water will continue to sink till it reaches the bottom no matter how deep the water. This is because water is but slightly compressible, and a cubic foot of water at the bottom of the deepest places in the ocean weighs but five percent more than at the surface. Sea water at the surface has an average specific gravity of 1.026 at 15° Centigrade. At 3000 fathoms, or 18000 feet or more, in depth, the temperature is 2°C or just above freezing, and the specific gravity becomes about 1.028. Although the pressure is enormous, it is the same in all directions, and has no effect beyond the compression of the object. In general, therefore, any object which will sink at all, whose specific gravity, that is, exceeds 1.028, will sink to the bottom at the deepest parts of the ocean.

How does an oyster make pearls?

When the oyster is a tiny thing it floats about on the top of the sea, without any shell, just like a piece of jelly. But when the shell begins to grow, the oyster gets too heavy to swim, and sinks to the bottom of the sea. There it fastens itself to a rock and opens its shell to let in the sea water, which has in it the little things which the oyster eats. But sometimes a tiny speck of sand, or the egg of a fish, or a tiny speck of a sea insect enters the shell. The oyster cannot get it out, so it covers it over to make it smooth, so that it will no longer hurt. From the oyster's body there comes a fluid which covers the sand, or whatever it may be. The fluid hardens. Then there comes more fluid, layer

upon layer of it. This also becomes hard, and in time the little, irritating speck has become a smooth, round, lustrous pearl.

How long has it been known that the earth is round?

The first approximation of the shape of the earth was by Eratosthenes, the geographer. (276-196 B. C.) He declared the earth to be spherical, and measured the length and angular amplitude of an arc of a great circle from Alexandria to Syene, 500 miles south of Alexandria. This was by no means accepted as conclusive, and the theory that the earth was a plane was not again disputed till the time of Columbus, who in 1492 proved that the earth was actually a sphere. Magellan's voyage around the world, in 1519-22, convinced the world of the spherical form of the earth.

Sir Isaac Newton (1642-1727) declared the globe to be an oblate spheroid, a sphere flattened at the poles. He was violently opposed by a French scientist, Cassini, and his followers. The argument was permanently settled by the famous Lapland expedition, sent out in 1735 by the Academy of Science of Paris, under Maupertuis and Clairaut. They declared the earth to be an oblate spheriod; thus upholding Newton, and, as Voltaire remarked at the time, "flattening both the poles and the Cassinis."

What makes a piece of iron get red when very hot?

Heat is sometimes called invisible light. It is thought to be the vibration of ether in longer waves than those of light. The nerves of sensation are responsive to very faint, very long, waves of heat in the ether, but the optic nerve is not sensitive to any waves that come to the eye more slowly than at the rate of 400,000,000,000,000 (four hundred trillion) per second, a rapidity of movement utterly beyond conception. When, therefore, a piece of iron sends off ether heat waves (each about $\frac{3}{100,000}$ of an inch long) they make themselves noticed to the eye as red rays. White rays are infinitely more rapid.

What is the difference between a moth and a butterfly?

The butterfly is usually quite gaudy; but there are many very plain butterflies, just as there are many beautiful moths. The butterfly enjoys the sunshine and is flying about all day long. The moth, however, prefers the dusk and even the night. One physiological distinction is that the butterfly has his antennae or feelers at the end of his head, and they end in a club, and are never tapering nor feathered.

How is silk made?

Silk is the product of the silk-worm, which can be the larva or caterpillar of any one of several species of moth. The most common is a yellowish gray kind, native to China, where silk was made from remote antiquity. When full grown the silk-worm is about three inches long and has a horny projection on the last joint of its body. Its food is the leaves of the white mulberry. On the lower wall of its body are two glands which contain a gelatinous substance and which become enlarged when it is time for the worm to spin the cocoon in which to pass the pupa state. The glands unite at the mouth to form a common duct called the spinneret, and through this duct the worm ejects the gelatinous semi-fluid which becomes hardened into a fiber upon contact with the air. This is the raw silk. When the cocoons are made, the pupae are killed by putting them in hot water. Then the silk is unwound from the cocoon and sent to the market. Raw silk varies in color from a bright orange to white.

Of what use are earthworms?

The boy who likes to go fishing would consider the chief use of the earthworm, or angleworm as it is usually called, the use that fishermen make of his squirming body as bait. The earthworm spends his time burrowing through the ground, eating the earth as he goes. In cold weather he digs deep to escape the frost, and comes up again in the spring. He doesn't bother the growing vegetables and is of much service to the agriculturist because he helps to loosen the soil and gives the air and water a chance to get below the surface. Earthworms are frequently found on the ground and on stones after a severe rain storm; but they have not come down from the clouds;—they have been drowned and washed up out of their burrowed holes. Sometimes they are found in the most unaccountable places, but their presence can be explained usually without resorting to the extravagant fancy that they have been carried up in the clouds and dropped again.

Do toads cause warts?

Toads are certainly repulsive in appearance. This is partly due to their squat, flabby, bloated shape, and partly to their warty skin. The latter is due to a number of glands which secrete an acrid fluid, which constitutes their chief defense, as most animals will not touch the toad. Snakes, however, do not object to eating them. Toads sleep or rest during the day and go abroad at night devouring insects. They are among man's best animal friends, and deserve protection and encouragement. It is a good thing to have a couple in your garden. They are perfectly harmless to man, and the notion that they cause warts has no foundation.

What are bats?

Bats are not birds, they are wing-handed flying mammals, belonging to the zoological order *Chiroptera.* In Europe and North America they are generally quite small and are harmless. In Aus-

tralia the largest fruit-eating bats are found. They are called the kalong or flying-fox, and are regarded as a pest. In Chile and Brazil the blood-sucking "Vampire Bat" is found. They attack horses, cattle, and even human beings when they find them asleep. Bats have a mouse-like skin which is usually full of filth germs. They hang head downward in sleep during the day, in crevices, hollow trees, corners of the barns, etc. At night they awake and go out in quest of bugs and flies.

Do flying-squirrels fly?

No, flying-squirrels do not really fly, they *glide* on their monoplane arrangement of skin which is stretched on each side from the front legs to the hind legs. When the squirrel makes a high leap he spreads his legs and offers such a large surface of resistance to the air in comparison with the weight of his body that he descends slowly. He not only makes a parachute of his extra skin, but he can guide his gliding to some extent.

What are flying-fish?

There are several varieties of fish which are able to sustain themselves above water for a little distance because of the large size of the pectoral fins. But the term "flying-fish" is usually limited to one remarkable genus, the Exocoetus, (the Mackerel-pikes) which live in tropical waters. They have been known to fly through the air for a distance of 200 yards. It is their way of escaping their enemies, especially the dolphins.

Where does the rattlesnake get his name?

The rattlesnake is an American snake. It is highly poisonous and is to be found in about every state in the Union. It gets its name from the rattle of horny rings at the end of its tail. The snake makes these rings rattle, probably involuntarily, when it is excited or angry. Its nature is sluggish and it prefers defensive to offensive tactics except when in quest of its prey, which consists of rabbits, rats, squirrels and other small mammals. Rattlesnakes do not charm their victims. The number of rings on the rattle does not determine the age of a "rattler." But it is probable that new rings are added at successive sloughings, that is, casting off of their old skin. This may occur several times in a year. The rattle is not used by the snake to lure victims or to attract a mate. Rattles with twenty-three rings in them have been found.

What are the biggest snakes in the world?

The very largest snakes are the anacondas. Anaconda is a popular name for two closely related species, the *Python tigris* of Ceylon, which has been found 33 feet long, and the *Eunectes murinus*, of tropical America, allied to the boa constrictor, sometimes over 40 feet long. They are not poisonous, but are said to have wonderfully powerful hypnotic influence, and they kill by crushing.

Were there once great animals which we do not now have?

In remote ages, long before man lived on the earth, many great bulky animals roved over the plains, through the forests and in the waters of the earth. Their skeletons are dug up every day, and their size makes us thankful that they have passed out of existence. In the great Mesozoic age, a name given to a long period of time in which the ancient primitive forms of life were changing and more recent forms beginning, there were huge lizard-shaped creatures called sea-saurians and dinosaurs and pterosaurs. The first, the swimming lizards or sea-saurians, were long-necked monsters called plesiosaurs, and the fish-like ichthyosaurus, with its great tail, big head and wonderful eyes. In some species the eye measured thirteen inches in diameter and was fitted with thirteen sclerotic plates around the pupil so as to form a self adjusting telescope. Another sea-saurian was the ophthalmosaurus. The second, the great dinosaurs, were the cetiosaurs, (that is, the "whale-lizards") said to have been 50 feet long and ten feet high; the megalosaurus, ("great-lizard") also from 30 to 50 feet long; the huge atlantosaurus, the largest reptile of which any remains have ever been found,—one discovered in the Jurassic strata of Colorado indicating a length of 100 feet and height of 30;—and the Brontosaurus, the almost completely restored skeleton of which may be seen in the New York Museum. The third, the winged saurians or pterosaurs, were the numerous species of the pterodactyls, which ranged from small lizards the size of a sparrow to bulky monsters with a spread of wings 25 or more feet. Their bones were hollow like birds'. The archaeopteryx was a true bird, with teeth and a lizard-like tail. In more recent geological times we find traces and remains of huge elephantine animals, the mastodons and mammoths, and a variety of bear called the cave bear. The megatherium, a giant extinct sloth, attained a length of 18 feet. Of course there are many other species of extinct animals; the above are simply representative.

What is cork?

Cork is the bark of the cork-oak tree which grows around the Mediterranean Sea. Spain and Portugal supply the world with most of its cork. The cork-oak is not very large; it seldom gets over 60 feet high; but its trunk is often over three feet in diameter. The tree must be about 25 years old before it bears cork. The first layer is not of much value. The second is better, and the third is the best. A crop of cork is taken from a tree every eight or ten years.

What are sponges?

If scientists did not tell us better we would think sponges were plants. But the biologist classifies

them as *Porifera* of the order *Spongida*, in the sub-kingdom, *Protozoa*, and describes all their animal functions. They do not move, however. They are fixed to rocks, in the mud, or on the sea weed in the shallow and deep water of the sea. It is the dead skeleton that we use, after it has been treated and cleansed.

How is honey made?

Honey is the food which bees manufacture for themselves. Bees live in colonies, having one queen, the only female, who lays all the eggs from which are hatched the bees of the following generation. There are numerous male bees called drones. Because these do not work we call any idler a "drone." They are killed by the workers after the honey is made. When a hive becomes over-crowded, the children decide to migrate. They follow a new queen who leads them sometimes far, sometimes only a short distance; and when she stops the colony swarms, that is, it makes a ball of itself. The queen lights upon some object, usually the branch of a tree, and all the other bees crowd around her, lighting on top of each other. This is the time to capture the bees and put them in a hive. The hive is a box fitted out with frames about four inches square by one and a half deep, in which the bees can build their wax framework and store away the honey. The bees have not been in the hive long before they begin to get busy. The workers fly out in quest of nectar from the flowers. Blue and pink flowers are preferred, but any flower having sweetness in it is acceptable. Through a sort of proboscis the bee sucks the nectar, which passes through the short pharynx into the gullet or honey bag, where it begins to undergo chemical change. Part of it passes on into the stomach and nourishes the worker. In getting the nectar the bee usually gets pollen on his legs and tongue, which he does not mind for he uses it to feed the larvae, and he eats some of it himself. (It is probably more correct to speak of the worker as "she," for workers are undeveloped females.)

Some of the bees work inside while the rest go out for honey. Those in the hive make the wax walls of the comb from a secretion which exudes from eight little glands in the abdomen of the bee. After a meal of honey this waxy substance exudes even when the bee is resting or perhaps dozing after dinner. Some of the younger bees act as nurses. They roll little pellets of pollen and honey and water for the larvae to eat, or store away this food by surrounding it with a varnish also exuded from the mouth of the bee. The stinger of the bee seems to have two purposes, first as a protection, to keep robbers away from the hive, and second to sterilize the honey. Often the bees are seen walking up and down over the comb stopping occasionally to sting a cell. The poison is an antiseptic and its formic acid prevents fermentation in the honey. The young are put away in cells while they are still eggs; and here they go through their grub and pupa or chrysalis stages before becoming bees. The cells containing the queen bees are especially fed by the bees. If the queens are killed or lost in any way the bees can literally manufacture another queen by putting a worker-grub in a large cell and making her eat as much as the queen-grub would eat. When the wax of the comb is dark it means that the cells have been used by the bee for cradles to nourish the larvae.

Why do weeds grow in our gardens?

We may plow our garden and lay it out in neat patches, and plant only the best seeds, but before the plants appear ten thousand little green blades come peeping out all over the garden. They are the advance leaves of the common weeds; but how do the weeds get there? We consider it unfortunate that the very plants we do not use, but rather despise, are the most easily grown. Those plants we call weeds grow from seeds which are both very numerous and very easily scattered. Many are provided with cottony tufts which act as tiny balloons. Occasionally a strange and not unwelcome plant starts to grow in the garden. In all probability its seed had clung to some object which a bird had been carrying, and which was dropped for some reason.

What is the Passion-flower?

This is a tropical American flower so named from the fancied resemblance in its parts to the emblems of our Lord's Passion. The leaf is symbolic of the spear that pierced His side; the five anthers are the five wounds; the tendrils are the cords or whips; the column of the ovary is the upright of the cross; the stamens are the hammers that drove the nails; the filamentous process is the crown of thorns; the calyx is the halo of glory; the white tinge stands for purity; the blue tint means heaven; and it remains open three days, typifying His three years' ministry.

Where is the largest tree in the world?

"Old Moses" is the name given to the largest tree in the world. It stands in a grove near the Tule river, California, and was discovered in 1874. The diameter at the point where the top has been broken off is 12 feet, and the height of the trunk still standing is 240 feet. The tree is thought to be 4850 years old. The hollow of its trunk will hold 150 people. It has been fitted out as a drawing room, with carpet, chairs, tables, sofas and piano. A section of the tree 74 feet in circumference was exhibited in New York in 1879.

How was coal made?

Several theories have been put forth concerning the origin of coal, but that which is generally be-

lieved today is, that in remote ages during a period called the Carboniferous, the portions of the earth above sea level were rank with vegetation, much of it in the form of great trees. The earth's crust was very subject to risings and sinkings in those formative times; and after a forest had been sunk below water for a long time until the vegetation was all fallen, it was covered with sediment and mud and animal remains. After a long period of time the crust of the earth rose and the buried vegetation dried out and exuded the oxygen and hydrogen of the buried mass in the form of marsh gas and carbonic acid gas as it, decayed and mineralized under the force of great weight and by process of chemical change. In many places the land sank and rose, again and again, thus forming many layers of carboniferous deposits. Often coal deposits containing 98% of carbon are dug up, in the unbroken form of the trunks of the prehistoric lepidodendrons and conifers.

How often ought we to breathe?

When we are in motion or have just exerted our physical strength we breathe faster than usual. The average number of respirations for people at rest are as follows:

Two months to two years - -	35 per minute.
Two to six years - - - -	23 per minute.
Six to twelve years - - - -	20 per minute.
Twelve to fifteen years - -	18 per mintue.
Fifteen to twenty-one years -	16 per minute.

In every exhalation carbonic acid gas is expelled. In twenty-four hours a boy of ten expels ten ounces; a girl of ten, nine ounces; a boy of sixteen, sixteen ounces; a woman of nineteen, twelve ounces; a man of twenty-eight, seventeen ounces.

What should our pulse and temperature be?

The pulse is the slight beat or shock felt on an artery, caused by the systole or regular contractions of the heart which impels the blood through the vessels. At birth the number of pulsations per minute is 140; at one year, 120; at two years, 110; during middle life 70 to 80; and in old age a little faster. The pulse is slower in man than in woman. It is also affected by position, being 10 beats faster when one stands than when one sits, and 15 beats faster per minute in a standing than in a recumbent position.

The temperature should be 98$\frac{3}{5}$ degrees; but many people in perfect health vary above or below this two, three, or four-fifths. With every degree of rise in temperature of the body, the pulse beats 10 times more per minute.

Does all of the body ever go to sleep?

Sleep is one of the mysteries of the life of mankind. It is impossible to give a precise definition of it, but it may be said to be that state in which the relation of the brain to certain parts of the body is temporarily suspended. However, there are some organs, the heart, lungs, digestive tract and the nervous system connected with them, which do not rest, do not suspend action. It is not known whether even the brain suspends all action; for the suspension of consciousness does not mean that the brain may not be active. Indeed there are some notable cases on record in which people while unconscious have done things which it would have required considerable mental exertion to accomplish when awake.

How much does the average brain weigh?

The average weight of the human brain is said to be 49½ ounces for man and 44 for woman. The Scotch brain seems to be the heaviest, 50 ounces; the German 49.6; the English 49.5; the French 47.9; and the Eskimo 43.9 In the capacity of brain cases there is greater variation. The capacity of the Anglo-Saxon's and German's is 105 cubic inches; of the Negro 96 cubic inches; of the ancient Egyptian and present Hottentot 58 cubic inches. But it is a mistaken notion that size or weight of brain determines intellectuality. That brain power is not necessarily connected with brain substance is shown by the tables which medical and scientific societies have compiled. For instance, a bricklayer, aged 38, of only fair intelligence, who could neither read nor write, had a brain weighing 67 ounces; but a celebrated philologist, aged 54, had only 47.9 ounces of brain, and a brilliant mineralogist, aged 77, made a success of life with a brain of only 43.27 ounces. Another man, an idiot since his childhood, had a brain weighing 55 ounces.

Are microbes dangerous?

There are 3,000,000 sick people every day in this country, and of this number about 750,000 die every year from diseases caused by microbes. The tuberculosis microbe destroys 150,000 per year; the pneumonia microbe over 100,000; the typhoid microbe about 25,000, one-tenth of its victims; and about 100,000 infants perish yearly from disorders of the digestive tract caused by microbes in impure milk, water and food. To wage a successful warfare against the microbes there are several things to be done. Strict cleanliness is necessary; for the germs live in dirt. Keep the teeth, hair, nails, and skin as clean as possible every day. Bathe not to get clean but to keep clean. Never drink out of a cup, glass or dipper from which any and everybody has been drinking. If the water has a bad smell or taste, is discolored, or is reported to have disease germs in it, boil it twenty minutes before drinking and always keep it covered while cooling. Sterilize all vessels containing milk and boiled water. Never return milk bottles to the milkman without having washed them thoroughly and sterilized them in boiling water. When you have a cold never let your handkerchiefs lie about. Put them in a

covered vessel by themselves and boil them by themselves. Also, do not sneeze in a room or car without catching the sneeze in your handkerchief. You can avoid sneezing very often by pressing hard upon your upper lip just above your teeth. Never put money, paper or coin, near your mouth or nose; and always wash your hands after any handling of it. When you get a scratch or cut, bathe it as soon as possible in some antiseptic and wrap it up. Keep it clean, no matter how insignificant it may seem. Always wash fruit bought at a fruit-stand, before eating. If exposed to some contagious disease, remove all your clothing, disinfect it, and take a thorough bath, washing out nose and mouth with some antiseptic. One effective safeguard against germs in the home is the habit of letting plenty of fresh air and all the sunshine possible into the house. All garbage should be promptly removed, buried or burned. Tolerate no flies in the house.

How can we destroy germs?

The best disinfectants or germicides are formalin, bichloride of mercury, carbolic acid, chloride of lime, hydrogen-peroxide, boiling water and sunlight. Germs multiply with amazing rapidity. They must not therefore be allowed to get a foothold in the system. A diluted disinfectant is called an antiseptic because while it may not kill all the germs it prevents their growth and propagation.

Why are flies, mosquitoes and other insects dangerous?

The common house-fly is a pest, and does incalculable damage to people's health. He is a scavenger and comes in contact with all the filthy germs that inhabit decaying matter. These cling to his dirty feet, which he does not wipe before he walks over our food. Flies should be killed at every opportunity; and their breeding should be prevented by strict cleanliness in the house and yard.

There are several kinds of mosquitoes. The anopheles is the species which carries malaria. He is covered with a brown and yellowish tint, and when at rest his proboscis, thorax and abdomen are in a straight line at an angle to the surface he rests upon. Other species take a hump-backed posture. The *Stegomyia calopus* is the yellow-fever mosquito and is found in and near the tropics. This is a domestic insect and does not breed far away from human habitations. The most effective way of getting rid of mosquitoes is to spread oil upon the marshy places where they breed.

Fleas of the rat transmit the germs of the bubonic plague from men, rats, and ground squirrels to people. Strenuous measures are employed at seaport wharves to destroy all rats.

The tsetse fly of Africa carries the deadly microbe of the sleeping-sickness from the sick to the well. Leprosy and pellagra are supposed to be carried very often by insects.

How long can we live without eating?

Very often we read of miners who have been entombed by accidents for seven or eight days and who are found dead. They are reported to have starved to death. Strictly speaking, this is not true. The normal body can exist without food from 20 to 30 days, depending upon the person's weight. A great deal depends upon the condition of one's mind; and the chances are that most of the "starved" miners have died of fear, not realizing that they could exist so long without food. A great many men have experimented with the fasting cure for both sickness and fatness, in recent years, and many remarkable fasts are recorded. There have been many fasts by both men and women protracted over forty days. An Italian named Succo fasted fifty days and then *ran* up the steps of Eiffel Tower. A western hotel-keeper is reported to have fasted ninety days, three whole months. He weighed over three hundred when he began and about 185 when he broke the fast. A great many animals hibernate, that is, pass the winter in a state of torpor. They also refuse to eat when sick or seriously injured. A chicken is known to have lived four weeks during the middle of summer with nothing but water.

How shall we care for the teeth?

Teeth are extremely important factors in health. Proper mastication of food is essential to good digestion; and soundness of the structure of the teeth forestalls the possibility of infection in the mouth and alimentary canal. It is necessary to clean the teeth regularly three times a day with a good stiff brush. Above all clean them before going to bed at night. Once a day dental floss should be used. This should be run back and forth between the teeth and well up against the gums. Any good toothpaste or wash or powder may be used. About every six months have a dentist examine your teeth, look for cavities and scrape off the tartar. Do not wait until a tooth aches before having it treated. If the teeth are watched the cavities can be filled before the decay reaches the sensitive dentine.

How many hairs have we on our heads?

The number of hairs on a grown person's head averages from 129,000 to 150,000. The hair can be kept in good health by frequent rubbing, brushing or combing, by allowing the air to get at it, and by keeping it clean. Baldness is unknown among wild tribes of men who never wear tight hat-bands around the head. This pressure around the skull interferes with the nerve supply to the scalp.

How warm should the living room be?

It seems to be best to have the temperature of the room we sit in when not exerting ourselves about thirty degrees lower than the temperature of the body. If we are in good physical condition a

temperature of 65° to 70° will be quite comfortable. Of course in the hot summer time this is practically impossible. If the temperature goes above 73° it is likely to cause drowsiness and is apt to make us over-sensitive to the freezing temperature out of doors in the winter. Chemical action within our bodies causes heat, increasing it to demand; and evaporation of excreted moisture in the skin reduces the heat; so that a balance is kept quite constant even amid a great variety of surroundings.

How do we injure our eyesight?

One of the commonest mistakes in the use of the eyes is that of facing a light while reading, with the printed matter in the shadow. We should always sit with our back to the light so that the light shines over our shoulder. Another mistake is letting too bright a light shine on the white surface of the paper or book we are reading. It is a bad habit to read while lying down. The print of a book should not be so small that it tires our eyes to read it. The eyes should not be used three or four hours at a stretch upon minute work without intervals of rest. Don't try to read after sundown without artificial light. If one is near-sighted he ought to have his eyes examined and wear glasses. The continuous appearance of sties on the eyelids is an indication of eye-strain and the need of glasses. In case of trouble with the eyes a competent eye-specialist ought to be consulted. Many people ruin their eyes by purchasing any pair of glasses which seem to make things easier to see. This may be economical at the time but will prove very expensive in the long run.

Ought children to have animal pets?

In many cases it is a good thing for children to have pets. In the first place, they give their possessor abundant entertainment. They also teach a child to have compassion and the right consideration for the dumb creation. Some pets can afford a great deal of wholesome exercise for a child, while others can teach many valuable truths of natural history. Of course it is always necessary to see to it that the animals are in good health and that they are not abused. A child who is taught to take good care of a squirrel, crow, cat, dog, or canary bird will come to realize his or her duty to care well for more important forms of life.

Is gardening valuable to children?

Growing things have a fascination for children, and they never tire of learning of the mysteries of the seeds and plants. Moreover, to teach a child the ways of nature is to prepare a foundation for the proper understanding of the important things of life; and a knowledge of how things grow, and of how one can assist nature to bring vegetation to its proper fruition will give a child a sense of his relation to nature, and a pride in being able to take some part in nature's scheme for feeding the world. Working in the ground under proper precautions is a very wholesome practice for children. With a little oversight children can make their gardening profitable. and thus learn industrial and commercial principles of no small value.

How did our country come to be called America?

It received its name from Amerigo Vespucci (1451-1512) a naval astronomer, born in Florence. He fitted out Columbus's third fleet; and in 1499 he himself sailed for the New World and explored the coast of Venezuela. It is generally accepted now that Martin Waldseemuller, a German geographer, who published a rather inaccurate account of Amerigo's voyages, was the first to call the land across the Atlantic, "America." In this published account Amerigo is represented as reaching the mainland in 1497, before either Columbus or Cabot.

How old is the United States?

The birthday of our United States as a nation is July 4, 1776. Subtract that date from today and you will have the age of our country. It was July 4, 1776, that our forefathers decided they ought to be, and were, free and independent of the mother country, England.

What is the Liberty Bell?

The "Liberty Bell" is the bell which hung in the belfry of the Pennsylvania State House in Philadelphia at the time of declaring the independence of the colonists, July 4, 1776. The good old bellman rang the bell, so the story goes, for two hours when the Continental Congress, assembled in the State House, declared the colonies independent of England. The bell was cast in London in 1752; but when it reached Philadelphia the following year it cracked upon being tested. It was recast by American workmen in June, 1753. After the war it cracked again, and attempts to restore its tone have failed. It was taken to the World's Fair at St. Louis in 1885 and to the Panama Exposition at San Francisco in 1915. Peculiarly appropriate is the inscription on the bell, inscribed, of course, at the time of its being cast: "Proclaim liberty throughout all the land unto all the inhabitants thereof—Levit: XXV: 10." The bell weighs 2000 pounds.

Who is meant by "Uncle Sam?"

It is believed that the practice of calling the United States Government "Uncle Sam" originated in the following manner. At the city of Troy, N. Y., there was a very peculiar meat inspector named Samuel Wilson, whom his employees called "Uncle Sam." The inspected meat was sent to a contractor named Elbert Anderson, and was always marked E. A., U. S. The workmen joked about these letters, saying they must belong to Elbert Anderson and Uncle Sam. The joke was kept up and spread until it became common to refer to all

packages marked "U. S." as belonging to "Uncle Sam," and the name soon became common as meaning the government itself.

Who made the first Stars and Stripes?

The first flag known as the "Stars and Stripes" was made by Mrs. Betsey Ross of Philadelphia. Her home is still standing, surrounded by a glamour of patriotic romance. In April, 1818, Congress fixed the number of stripes at thirteen, the number of the original colonies and of the original Union; and enacted that a new star should be added (to the twenty then on the flag) for each new state admitted to the Union.

Where did the dollar mark come from?

There is a difference of opinion regarding the dollar sign, ($). Some assert it is merely the combining in a sort of a monogram of U and S. Others say the mark is a modification of the figure eight (8) and that it denoted a piece of eight reals, or the dollar, which was formerly divided into eight parts. It was then designated by the figures 8-8.

When was Washington made the capital of our country?

In 1800, the year after George Washington's death, the seat of the government was moved from Philadelphia to the city which the first and much beloved President had planned for a capital, and which now bears his name.

How did our country grow?

To the original 13 States, Vermont was added in 1791, Kentucky in 1792 and Tennessee in 1796. Of the territory between the original colonies and the Mississippi River, the Great Lakes and the Gulf of Mexico, nine states were formed and admitted between 1792 and 1848. Maine was added in 1820. In 1803 Napoleon sold to the United States the vast territory of Louisiana, out of which Iowa (1846), Missouri (1821), Arkansas (1836), Louisiana (1812), Nebraska (1867) were formed and made states; and the territories of the Dakotas, Indian Territory, Oklahoma and parts of Minnesota, Colorado, Montana, Wyoming and Kansas were formed. In 1845 Texas, which originally included the eastern part of New Mexico, the southeast corner of Colorado, western arm of Oklahoma and southwest corner of Kansas, was annexed. In 1848 Mexico ceded a territory about twice the size of Texas. In 1853, by the "Gadsden purchase," another Mexican cession was granted which is now the southern part of Arizona and southwest corner of New Mexico—south of the Gila River. Of this territory secured from Mexico the states of Cailfornia (1850), Nevada (1864), Utah (1896), Arizona (1912), New Mexico (1912), were formed and added. Out of Washington, Oregon and Idaho territory these states were formed and admitted in 1889, 1859 and 1890 respectively. Alaska was purchased of Russia in 1867 for $7,200,000. In 1898 Spain ceded Porto Rico, Guam, and the Philippines to the United States. In 1898 Hawaii was annexed, upon request of its citizens.

How many wars has our country had?

Before becoming a nation the Thirteen Colonies were involved in the almost constant quarrels of England and France. Disputes over the boundaries in America, conflicting claims in Acadia and New France, and weak policies toward the Indians were the direct and specific causes of the clash of arms on American soil.

Four wars, formally settled by treaties, may be enumerated: King William's War, 1689-1697; Queen Anne's War, 1702-1713; King George's War, 1745-1748; and the French and Indian War, 1755-1763.

Since the Declaration of Independence there have been five wars with foreign powers up to the present date (1916). First, the Revolutionary War, 1775-1783; second, the War with Tripoli, 1801-1805; third, the second War with England, 1812-1815; fourth, the Mexican War, 1846-1848; fifth, the Spanish-American War, 1898. Besides these there were several minor rebellions, several Indian wars and the great Civil War, 1861-1865.

When did the first steamship cross the Atlantic?

In 1819 the Savannah, a combination sail and steam ship, made a successful trip across the Atlantic, the first by a vessel of this character.

How did the days of the week get their names?

The days of the week were named (for us who speak English) many hundreds of years ago by our Anglo-Saxon forefathers. Sunday is a combination of Sun, the orb of day, and daeg, meaning "day." Monday is named in honor of the moon. Tuesday is named after Tyr, the Norse god of war. Wednesday is named in honor of the god Woden. Thursday is Thor's day, Thor being the bravest and strongest of the Scandinavian gods. Friday is named after the Norse goddess Frigga. Saturday was called Saeterdaeg by the Anglo-Saxons, who must have gotten the word from "Saturnus" the Roman god of the harvest.

What were the seven wonders of the ancient world?

1. The Pyramids of Egypt. (The largest of which covers an area of over twelve acres, and was originally 479 feet high.) 2. The Colossus of Rhodes. (This was a gigantic brazen statue of Apollo, 105 feet high, which stood for fifty-six years, when in 224 B. C. it was knocked over by an earthquake.) 3. The Temple of Diana at Ephesus. (Pliny says it was 220 years in building. It was 425 feet long, 225 feet broad, and was supported by 125 columns of Parian marble 60 feet high, each weighing 150 tons. It was destroyed twice and finally by the Goths in 256 A. D.) 4. The Colossal statue of Jove in the temple of Olympia.

(It was in ivory and gold. In the fifth century A. D. it was removed to Constantinople where it was destroyed by fire about 475 A. D.) 5. The Pharos or Light-house Tower of Ptolemy Philadelphus at Alexandria. (It was built about 283 B. C. by Sostratus, of white marble, and was said to be 400 feet high. Fires were constantly kept burning to guide the sailors in the bay.) 6. The Hanging Gardens of Babylon. (These were terraces one above the other, 400 feet by 400 feet, suspended and sustained by vast arches. The floors consisted of stone, reeds, bitumen, bricks and lead sheets, upon which was the mold of the garden, so thick that the greatest of trees could and did take root and thrive. An engine pumped water from the river to water the gardens. The ascent from terrace to terrace was by stairs ten feet wide.) 7. The Mausoleum at Halicarnassus, erected by Artemisia. (Little is certainly known of this wonder. It is supposed to have been rectangular, surrounded by 36 Ionic columns, surmounted by a pyramid, on the twenty-fourth step of which was a colossal statue of King Mausolus, brother and husband of Artemisia, who succeeded him as ruler of Crete. Hence, the word mausoleum today means any elaborate tomb for the dead.)

What are the seven wonders of the modern world?

A popular periodical took the toll of the leading scientists of modern times and from their reports established the following seven achievements as the wonders of the present day world: Wireless Telegraphy, Telephone, Aeroplane, Radium, Antiseptics, Spectrum Analysis and X-rays. It seems as if the Talking Machine ought to be included.

Who built the Sphinx?

The great Sphinx at Gizeh, in the Libyan desert near Memphis, is about one-fourth of a mile southeast of the Great Pyramid. It is a colossal form of a human-headed lion reclining, hewn out of the natural rock, to which masonry has been added in certain places, to complete the shape. It measures 172½ feet long by 56 feet high. It was probably built at the same time as the Great Pyramid, which was the sepulchre of Chufu or Cheops (3733-3666 B. C.) Tradition says Egyptian slaves in vast numbers were driven to the task of building the Pyramids and the Sphinx.

What is the Hall of Fame?

The Hall of Fame is a building erected on University Heights, New York, in which the names and achievements of the greatest Americans may be posted ten years after their decease. The building was a gift and the terms prescribed that fifty panels were to be filled in 1900 and five at the close of each half decade thereafter. Only native born Americans may thus be honored. But later provisions include suitable commemoration of great Americans of foreign birth.

What have been some great fires?

Rome was burned, probably by Nero's orders, 64 A. D.

Jerusalem was destroyed and burned by Titus, 70 A. D.

London fire of 1212 in which 3000 lost their lives, and much of the city north and south burned.

London fire of 1666, September 2-6, in which 13,200 houses, 89 churches and many public buildings were destroyed, and 200,000 people rendered homeless.

Moscow, sacrificed by the Russians to defeat the purposes of Napoleon, 1812; whole city burned to the ground.

In New York, December 16, 1835; 600 buildings, loss, $20,000,000.

In St. Louis, May 4, 1851; large portion of city destroyed; loss, $15,000,000.

Portland, Maine, practically all burned, July fourth, 1866; loss $15,000,000.

In Chicago, October 8-9, 1871; 17,450 buildings burned down, 200 persons killed, 98,500 persons made homeless; loss, $200,000,000.

In Boston, November 9-11, 1872; loss, 15 people, 800 buildings, $75,000,000.

In Baltimore Maryland, February 8-9, 1904; 75 city blocks burned, loss, $85,000,000.

The great San Francisco fire April 18-19, 1906. Loss by fire and earthquake $350,000,000. Most disastrous fire on record.

Were there ever giants?

Nearly all the ancient nations had traditions of times in which their forefathers fought with giants. It is a favorite legend with children today that has to do with Jack or another brave person who slays the hideous giants and liberates fair maidens from their castles. The Bible speaks of giants but means the word in the classical sense, just as Greeks spoke of heroes, as persons unusually stalwart and powerful. Goliath whom David slew, seems to be a real giant, however. He was over nine feet tall and proportionately strong. There have been huge people. The Roman Emperor Maximin, a Thracian, was nearly nine feet tall; C. Munster, died 1676, was 8 feet, 6 inches tall; Cajanus, a Swedish giant, exhibited in London in 1742, was about nine feet from heel to crown. Patrick Cotter O'Brien, who was 8 feet, 7¾ inches, lived in the 18th century. Frederick William I had a Swede in his guards who was 8½ feet high. Pauline Wedde, who died in 1844 at the age of 18, had attained a height of 8 feet, 2 inches. Anna Swan of Nova Scotia and Captain Bates, her husband, of Kentucky, are both 8 feet tall.

When did people begin to smoke tobacco?

When the first explorers reached the American continent, they found the red-skinned natives smoking the dried leaves of the plant later known as

"tobacco." This was an Indian name, probably derived from the peculiar smoking apparatus which the San Domingo natives used, called the *tabaco.* Columbus mentioned the use of this narcotic upon his first return. But it was not successfully introduced into Europe until the middle of the 16th century. Its use spread rapidly through all the nations. After the Crimean war the English soldiers brought home the habit of cigarette smoking acquired by contact with the Turks. When and how the American Indians ever began to smoke, it is of course impossible to ascertain.

Why is a barber's pole striped red and white?

Anciently the surgeon and barber were one and the same. In blood letting the patient grasped a pole, upon which when not in use the fillet or bandage was hung. The pole with the arm bandage became a sign for the surgeon. At length, instead of using the same pole for operating and advertising, a pole was painted red and a white bandage was painted with more or less geometric precision around it, whence the modern barber's pole.

How should the dictionary be used?

The dictionary should be used frequently. Whenever we are in doubt as to the spelling, meaning or derivation of a word, we should go to the dictionary at once before we forget the word. After finding the word, let us fix the spelling and pronunciation well in mind; then observe the derivation, that is, what Latin or Greek or Anglo-Saxon word it has come from; then let us see how the word or its parts are related to other words; and lastly let us compare it with its synonyms, or words which mean the same thing, and if necessary look up those also. Don't look up a word for the moment and for present use; look it up for all time,—fix it in your mind. Learn the signs used in the dictionary, so that you know the sounds of the letters and signs used in the pronunciation. After looking up a new word use it frequently for a few days to make it familiar.

Do animals talk to each other?

Strictly speaking man is the only animal that has a language. The lower animals have methods of expressing their fears, joys and emotions, and they can doubtless convey a few simple ideas to each other. It is possible that the first men and women that lived on the earth conducted their social and domestic affairs with a vocabulary not much larger than the grunting animals about them. But man is peculiarly fitted for articulate speech. The larynx, vocal cords, mouth, tongue, lips and teeth,—all of which are instrumental in producing the sounds we call speech—are admirably adjusted in man to perform this office. Certain birds, the parrot, magpie and raven, have a wonderful capacity for the imitation of the human voice; but these animals never employ this talent for the communication of an original idea to their fellows. Scientists have supposed that the higher apes have a sort of language, and many have tried to classify the chattering sounds which they make. But nothing very convincing has been learned yet in support of the supposition. Professor R. L. Garner claims to have discovered a vocabulary of over twenty words used by one of the more intelligent species of monkeys.

Who made the alphabet?

The idea of a smaller unit than a word never occured to the ancient Hittites, Chaldeans, and Chinese. But the Egyptians slowly developed the notion of syllables and symbols for sounds which in time developed into a true alphabet. Of the 400 phonograms or sound characters used by the ancient Egyptians, 40 attained an alphabetical character. The Phoenicians took the Egyptian alphabet and improved upon it, inventing a cursive style of writing. The chief credit for this is ascribed to Cadmus of Tyre (about 1500 B. C.) The alphabet underwent some changes in the hands of the Greeks. But the letters which the early Romans used are practically the same as we use today.

What is the oldest book in the world?

The document claiming this title is now in the Bibliotheque Nationale, Paris. It was discovered by M. Presse in Thebes (Egypt). It is a copy on papyrus of a document written by a governor, Ptah-Hotep, in 3580 B. C. The author is stated to be 110 years old, and he wrote much in the style of the Hebrew Proverbs.

How do we measure our years and months?

In 710 B. C. the Romans made radical changes in their calendar and divided the year into twelve months. In 293 B. C. the Romans erected the first sun-dial and divided the day into hours. Dionysius, in 285 B. C., found the solar year to consist of 365 days, 5 hours and 49 minutes. The ancients tried repeatedly to reconcile the "month," which originally depended upon the changes of the moon, with the solar year. Christian nations now disregard the lunar month entirely. Not so the Mohammedan nations, whose calendar gains a year on ours every thirty-three years, because they use the lunar month and their years contain 355 and 365 days alternately. The Julian Calendar, established by Julius Caesar in 45 B. C., considered 365¼ days the proper length of the year. Caesar ordered that the beginning of the year should be January 1, and provided for the adding of one day every fourth year. This calendar is still in use in Russia and generally by the Greek Church. But the true length of the solar year is 365 days, 48 minutes, 45.5 seconds. At the time of Pope Gregory the vernal equinox had fallen back to March 11, instead of March 21. The Pope therefore decreed that the day following October 4, 1582, should be

called October 15, and hereafter only such century years should be leap years as were divisible by 400. This is called the Gregorian Calendar. It was immediately adopted by all Catholic countries, but England did not make the change until 1752.

What is Mecca, frequently seen in our reading?

Mecca (anciently called Becca) is one of the oldest cities of Arabia. From remotest times the Kaaba (i. e. cube), a temple, about 50 by 40 feet and 40 feet high, was the attraction for pilgrims; who came by thousands to worship the idols there and do homage to the celebrated fetish, the Black Stone. When Mohammed converted the Kaaba into a mosque, surrounding it with a large quadrangle having nineteen gates and seven minarets, and holding 35,000 people, the legend was invented that the Kaaba was built by Abraham when Ishmael was cast out. The Black Stone is apparently a meteorite. The pilgrim walks around the Kaaba seven times, kisses the Black Stone, touches another stone, the Southern Stone, (one of inferior sanctity) and goes around the Hijr, an enclosure containing the so-called graves of Hagar and Ishmael. The population of Mecca is less than 60,000 but it is annually increased by 100,000 pilgrims. It is disputed whether the shrine of the Black Stone or the medicinal spring Zemzem was the original attraction. All good Mohammedans are supposed to visit Mecca. Hence, when any place becomes a favorite or profitable resort for any class or school or sect we say it is a "Mecca." Thus Paris has long been a "Mecca" for artists.

What language is spoken by the most people?

The English language is spoken by more people than any other language in the world. There is hardly a city in civilization where it is not taught; and hardly a country in the world where there are not many natives and strangers who speak it. It is estimated that there are 160,000,000 users of the English language.

Has music always flourished?

Music is the "universal language," but as an art it is new and young, the only art in which modern civilization does not have to pay homage to Grecian or Oriental ideals. Not a great name in music is found prior to those of Orlando di Lasso and Palestrina in the 16th century.

The great masters of music have been Mozart, Haydn, Beethoven, Bach, Handel, Mendelssohn, Gounod, Schubert, Schumann, Wagner, Liszt, Rubinstein, Verdi, Rossini, Tschaikovsky, and Strauss.

Are lightning-rods a real protection against lightning?

When lightning-rods were first suggested, people seemed to believe in them; but gradually a suspicion began to spread that they were ineffectual, —that they would not protect a house or barn from the power of the lightning. Probably this suspicion grew because some rods were not properly fitted up or had become detached from the ground fastening, or were broken; and when the lightning struck the buildings with these defective rods upon them it did considerable damage. But the theory upon which the lightning-rod is based is quite sound. The rod affords a means by which the electricity in the earth and building can safely pour off into the air. When a discharge from the clouds comes near enough to be attracted by the metal rod and strikes it, the lightning runs down the rod and into the earth without doing any harm to the building. Care must be taken, however, to have the rod all connected and well embedded in the earth.

What are the great non-Christian religions in the world?

The chief creeds of the non-Christian world in order of their numbers of adherents are: Confucianism, Brahmanism (or Hinduism), Mohammedanism, Buddhism, Polytheism, Taoism, Shintoism, Judaism, and Zoroastrianism. The world's population is about 1,700,700,000 souls. Of these, there are estimated to be about 564,510,000 Christians, 300,830,000 Confucianists and Taoists, 210,540,000 Hindus, 221,825,000 Mohammedans, 138,031,000 Buddhists, 13,052,846 Jews, 25,000,000 Shintoists, and 173,556,000 belonging to various pagan and savage cults.

What was the fate of the Twelve Apostles of Christ?

It is tradition that St. John was the only Apostle who escaped martyrdom. Matthew is supposed to have been slain by the sword in Ethiopia. James the son of Zebedee was beheaded in Jerusalem. It is said that James, the brother (or cousin) of Jesus, was thrown from a pinnacle of the temple and then beaten with a fuller's club. Philip was hung on a pillar in Hieropolis of Phrygia. Bartholomew was flayed alive in Albanapolis of Armenia. Andrew was crucified in the city of Patrae in Achaia. It is tradition that Thomas was run through with a lance at Coromandel in the East Indies. Thaddeus was shot to death with arrows. Simon Zelotes was crucified in Persia. Simon Peter was crucified head downward during the persecutions of Nero. Judas Iscariot, the traitor, hanged himself in his remorse. Matthias, elected to Judas's place, was stoned and then beheaded. The great missionary Paul was beheaded in Rome during Nero's reign.

Who translated the Bible into the English language?

It is an astonishing thing that the English people did not have a Bible to read in their own tongue until John Wyckliff the Reformer made his translation in the last quarter of the fourteenth century. It was a translation of the Vulgate, (the Roman

Catholic Latin standard version.) Wm. Tyndale's version of the New Testament appeared in 1525. He was martyred before he completed the Old Testament. Tyndale had studied the original Greek and had seen the German version of Luther's Bible, so that his New Testament was a valuable contribution to the cause. Coverdale's version appeared in Zurich in 1535 and in London in 1550; but it was inferior to Tyndale's. The "Matthew's Bible" was a translation by John Rogers; it appeared in 1537. Another very imperfect translation was published in 1539, called the "Great Bible." Numerous other translations appeared, among them the Douay Bible from the Latin Vulgate, in 1582. The famous King James' Version was published in 1611. This was the work of fifty-four learned men appointed by the king. This version is still in popular use and its language has had a great influence upon the thought and mode of expression of great writers and speakers. The Anglo-American Revised Version appeared complete in 1884. The American scholars differed with the English in several points and published their own version some years later. This version appeared in 1901, and is called the American Standard Revision. Other translations have been made, some of them in the everyday vocabulary of today.

What are the magnetic poles?

The earth seems to be a great magnet, and has two poles. The North magnetic pole is situated in King William's Land, Canada, in Latitude 70° N. and Longitude 97° W. It extends over a considerable area, that is, the needle dips at an angle of 90° over an extensive area. The South magnetic pole is not diametrically opposite the North magnetic pole, but is found in Latitude 72° 23' S. and Longitude 154° E. The Poles are not stationary, and are supposed to have a slow circular motion. If it were not for these poles the needles of our compasses would be of no service in indicating direction. The needles always point toward the North magnetic pole.

What outlying possessions has the United States?

Alaska, purchased from Russia in 1867 for $7,200,000. Products: gold, seals, salmon, coal, lumber.

Philippine Islands, ceded to the United States in 1898 after the war with Spain, upon payment of $20,000,000. Products: sugar, rice, cotton, dyewoods, coffee, tobacco, hemp.

Hawaiian Islands, annexed to the United States in 1898. Products: sugar, coffee, fruit, nuts, whale-oil and whalebone.

Porto Rico, until 1898 a Spanish possession, then ceded to the United States; a mountainous, pleasant and healthful place. Products: coffee, sugar, tobacco, fruit, timber. Its population is divided: 60,000 negroes, 300,000 mulattoes, 600,000 white.

Samoan Islands, a part of which, (Tutuila and others of the Islands) were given to the United States when in 1899 England and Germany divided the Samoan islands. The islands lie in the western Pacific. Tutuila has a splendid harbor at Pago Pago.

Guam, which is the largest of the Ladrone Islands, was ceded by Spain in 1898. It has a population of over 6,000; and serves as a coaling station.

Panama Canal Zone, which was ceded in perpetuity to the United States by the government of Panama, according to the treaty of February 23, 1904. It is a narrow strip of land extending from the Atlantic to the Pacific Ocean, through which the United States government has built the greatest and most important canal of modern times.

Finger Plays for Mother and Child

The Sawmill

Z, z, z,
What is that sound, I pray?
Why, that's our big sawmill,
It's not so far away.

Z, z, z,
The saw whirls round and round,
(*Make circular motion with right hand.*)
Cutting lumber from the logs,
So big and long and sound.
(*Extend arms and curve them to represent the log.*)

Z, z, z,
The logs are trunks of trees,
Cut down in the dark forest,
(*Right and left forearms vertical to represent the trees. Arms placed horizontal when they are "cut down."*)
When the blasts of winter freeze.

Z, z, z,
To the streams the logs they haul;
All ready now to float them down,
When the warm spring breezes call.

Z, z, z,
The water floats them down,
(*Hands with a waving motion.*)
And they are caught and held quite fast,
Near the sawmill in the town.

Z, z, z,
Into the mill they go,
And the big saw cuts them busily,
(*Hands whirl in a circular motion.*)
As it whirls round so and so.

Z, z, z,
In neat piles the lumber stands,
(*Place left hand on top of the right hand.*)
All ready for building houses
In our own and other lands.

The Rabbits

(*Forefinger and middle finger of left hand held up straight, little finger and third finger curved to meet thumb, thus forming a "rabbit."*)

Whither, O whither,
O whither away,
Dear little Bunny
This bright spring-like day?
With a jump and a skip,
And a hop, hop, hop,
(*Move left hand quickly as if hopping.*)
Dear little Bunny,
Oh, can you not stop?

Here comes another,
(*Form rabbit with right hand the same as with the left.*)
Just see his long ears!
(*Move first and middle fingers.*)
Oh, he is hopping,
What is it he hears?
(*Move right hand as if hopping over laps.*)

Dear little Bunnies,
We'll be kind to you,
We'll feed you on clover,
And cabbage leaves too.

Oh, see, they are going!
They're hopping away!
(*Both hands move over lap.*)
You bad little Bunnies!
Why wouldn't you stay?

The Doves

This is the dove-house,
Up so high,
(*Fingertips of both hands placed together.*)
With its peaked roof
Against the sky;
These are the doves,
All gray and white,
(*Both hands flutter back and forth over table.*)
That live in the dove-house,
Snug and tight.
(*Form dove-house again with fingertips.*)

"Coo," say the doves,
As they fly away;
(*Hands flutter away over table.*)
"Coo," says the white dove,
(*Flutter right hand.*)
"Coo," says the gray.
(*Flutter the left hand.*)
"Coo, coo, coo,"
As they walk about,
(*Fingertips pattering over table.*)
Eating the corn
That we throw out.
(*Motion as of scattering corn.*)

We love you, dear doves,
Little white,
(*Flutter right hand.*)
little gray;
(*Flutter left hand.*)
When we clap our hands,
(*Clap the hands.*)
You will fly away.
(*Hands flutter over table and away.*)
But back to the dove-house,
Snug and tight,
(*Form dove-house with fingertips.*)
You will both return
When comes the night.

"D, d, d,"
(*Sound of the letter "d."*)
And "Coo, coo, coo,"
Dear little doves,
We all love you!
(*Hands flutter above table and down.*)

My Garden

Here is my little garden plot,
(*Arms curved over lap.*)
Watch me dig while the sun is hot.
I'll turn the earth with my little spade,
(*Palm of right hand up as if digging.*)
Nor stop at all till my garden's made.
(*Continue motion of digging.*)

Now I'll smooth it off with my little rake,
(*Fingers of right hand down as if raking.*)
And then my bag of seeds I'll take,
(*Left arm curved as if holding bag.*)
And drop them into the furrows—so,
(*Motion as if dropping seeds.*)
Rake over the earth so they will grow.
(*Make raking motions with fingers of right hand.*)

Now out with my nice red sprinkling-pot,
(*Right hand held as if carrying sprinkling-pot.*)
I'll water the seeds while the sun is hot.
(*Arms curved to form sun.*)
He'll send his rays and make them grow,
And my garden will flourish, I surely know.

Out on Grandpa's Farm

This is our Grandpa's farmhouse.
(*Tips of fingers together to form house.*)
This is the poultry yard so wide,
(*Hands and arms curved on lap.*)
With ducks, geese and chickens strutting inside,
Quite near the barn,
(*Form barn with fingertips.*)
Which is on the farm,
Where is built our Grandpa's farmhouse.
(*Tips of fingers together to form house.*)

This is the garden where vegetables grow,
(*Elbows on edge of table, forearms flat, and hands vertical.*)
Potatoes, beans, cucumbers, all in a row,
Turnips, and squashes, and pumpkins round,
And celery bleached all white in the ground,
By the side of our Grandpa's farmhouse.
(*Hands form house. The shape of the vegetables given above may be indicated by the fingers.*)

These are the apple and nut trees tall,
(*Elbows on knees, forearms and hands vertical.*)
Where the ripe fruit is gathered every fall,
Just over the wall,
(*Point to the right.*)
'Cross the brook so small,
At the back of our Grandpa's farmhouse.
(*Hands form house.*)

This is the barn all full of grain,
(*Form a large barn with hands and forearms.*)
Wheat, oats, barley and corn amain,
Great heaps of straw and sweet smelling hay,
(*Curve arms to form heaps of straw and hay.*)
Raked in the meadow one summer day,
(*Rake with fingers of right hand.*)
By the men from our Grandpa's farmhouse.
(*Hands form farmhouse.*)

This is the windmill very high,
(*Elbows close together and hands upraised.*)
That whirls its wings against the sky.
(*Move hands with a circular motion.*)
That pumps the water from far below,
(*Left fist on top of right fist, and make motion up and down as if pumping.*)
To give the barnyard a drink, and so
Refreshes the animals in the barn,
Which is built out on our Grandpa's farm,
Quite near our Grandpa's farmhouse.
(*Hands form farmhouse.*)

These are the horses and pigs and cows,
(*Run fingers over lap.*)
The rakes, and the shovels, the hoes and plows,
And the pitchforks to throw the hay in the mows,
(*Use fingers to indicate the shape or use of these implements.*)
And all these are kept in the great big barn,
Which is built out on our Grandpa's farm,
Quite near our Grandpa's farmhouse.
(*Hands to form house.*)

What the Fingers Say

(*Hold up one hand and indicate proper finger by pointing to it with the index finger of the other hand.*)

(*Right Hand*)

Says this little girl, "Do I have to?"
(*Thumb.*)
And this little girl says, "Oh, dear!"
(*First finger.*)
And this one says, "Yes, in a minute!"
(*Second finger.*)
While this one is pouting, I fear;
(*Third finger.*)
But this little girl (and I hope it is you)
(*Fourth finger.*)
Says, "Here is your helper! Now what shall I do?"

(*Left Hand.*)

Says this little boy, "I don't want to!"
(*Thumb.*)
And this little boy says, "I can't!"
(*First finger.*)
"It's really too hard," says the second and the third,
(*Second and third fingers.*)
"We never could do what you want."
But this little boy (Is it you? Is it I?)
(*Fourth finger.*)
Says bravely and cheerfully, "All right! I'll try!"

(*Both Hands.*)

Now what do you think of these children
Who always are ready for fun,
But who loiter, and fidget, and grumble
Whenever there's work to be done?
You don't want to be like the grumblers, I know;
Let's be like the ones at the ends of the row!
(*Hold up little fingers.*)

The Days of the Week

Sunday, the very first day of the week,
We all go to church in clothes clean and neat.
(*Hands folded on lap.*)
Monday's for washing,as everyone knows,
(*Motion as if washing on wash-board.*)
And Tuesday's the day that we iron the clothes.
(*Right hand horizontal as if ironing.*)
Wednesday's the day that the mending is done,
(*Move right hand back and forth as if sewing.*)
And Thursday's the day that the calling's begun.
(*Motion as if putting on hat for calling.*)
Friday's for cleaning, dust rugs and shake,
(*Motion as if beating rugs and shaking.*)
And Saturday's always the day that we bake.
(*Motion as if stirring a cake.*)
There's work for each day, as you can well see,
And work should give pleasure to you and to me.

Hiawatha

This is Hiawatha's tent,
(*Tips of fingers together to form tent.*)
By the clear Big-Sea;
And this is his soft cradle,
(*Right hand hanging limply from wrist.*)
Just hanging from a tree.
(*Swing hand slowly back and forth.*)

This is the big owl in the woods,
(*Thumbs and forefingers together and placed over the eyes.*)
To-whoo, to-whoo, to-whoo!
And above are the stars that twinkle bright,
(*Both hands raised above head.*)
All the dark night through.

This is Hiawatha's bow,
(*Right arm curved.*)
And these his arrows strong;
(*Left hand out, fingers extended.*)
This is his heavy club of wood,
(*Right arm extended, close right hand in a fist.*)
So big and hard and long.

These are the feathers on his head,
(*Right hand upright, fingers extended at back of head.*)
And the moccasins on his feet;
(*Hands with palms downward on laps.*)
And this is the way he softly runs,
(*Move hands softly over lap.*)
Through the dark woods, swift and fleet.

This is the boat in which he floats,
(*Curve palms and place hands together.*)
On the waves of the blue Big-Sea;
(*Rock hands back and forth.*)
Oh, Hiawatha is a boy
Most interesting to me!

Finger Plays assist the young child's mental awakening. Human activities are shown with the hand and fingers, sometimes the fingers alone. The mother may put the child's hands into the positions desired, or the child may imitate the mother's movements.

Favorite Poems for Children

Pat-a-cake, pat-a-cake, baker's man.
So I will, master, as fast as I can.
Pat it, and prick it, and mark it with T,
And put in the oven for baby and me.

Little Bo-peep has lost her sheep,
And can't tell where to find them;
Leave them alone, and they'll come home,
And bring their tails behind them.

Little Bo-peep fell fast asleep,
And dreamt she heard them bleating;
But when she awoke, she found it a joke,
For still they all were fleeting.

Then up she took her little crook,
Determined for to find them;
She found them, indeed, but it made her heart bleed,
For they'd left their tails behind them.

Mary, Mary, quite contrary,
How does your garden grow?
With silver bells and cockle shells
And pretty maids all in a row.

Little Miss Muffet
Sat on a tuffet,
Eating her curds and whey;
There came a black spider,
And sat down beside her,
Which frightened Miss Muffet away.

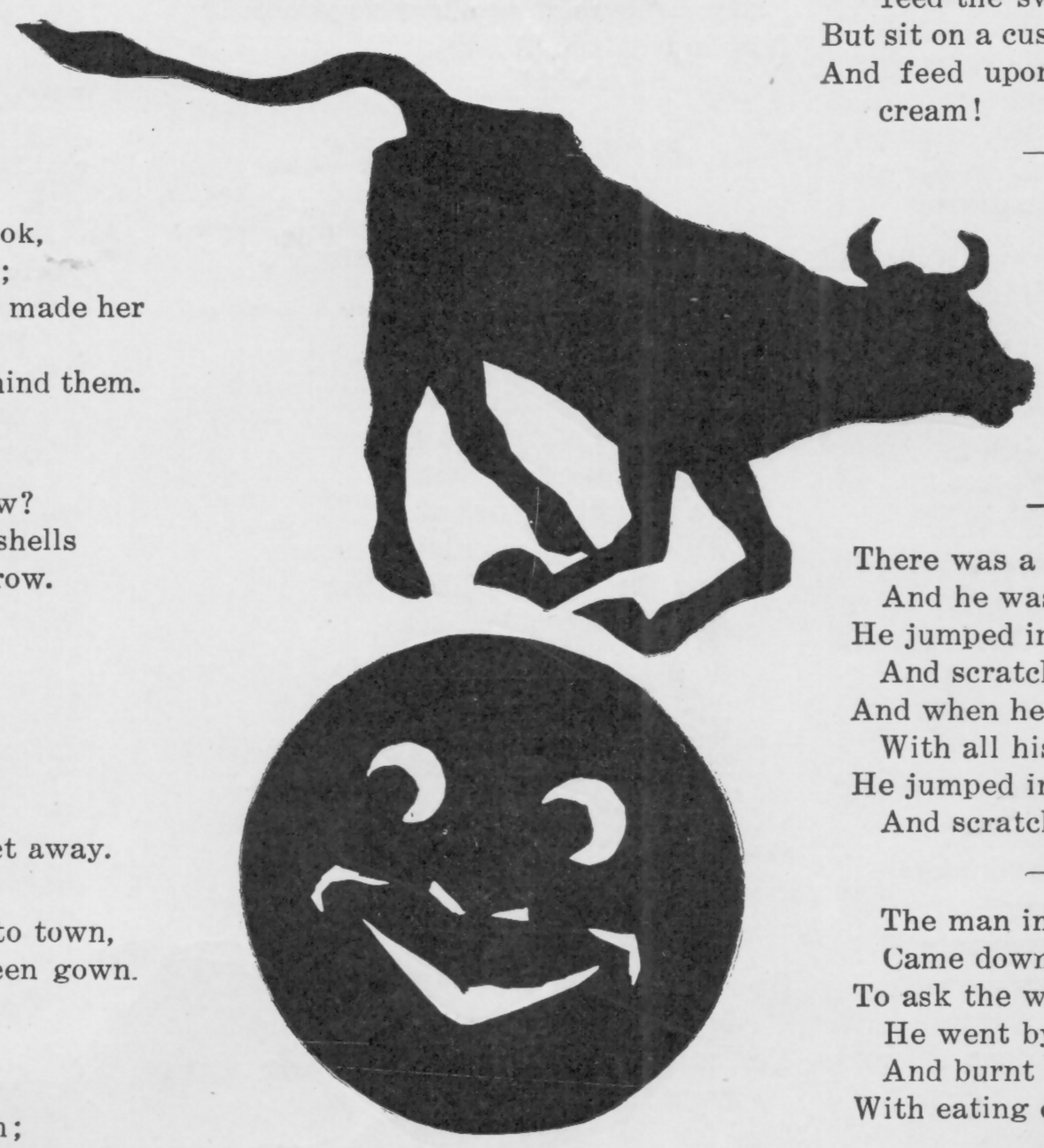
Daffy-down-dilly has come up to town,
In a yellow petticoat and a green gown.

Hey, diddle, diddle,
The cat and the fiddle,
The cow jumped over the moon;
The little dog laugh'd
To see such craft,
And the dish ran away with the spoon.

Ride a cock-horse to Banbury-cross,
To see an old lady upon a white horse,
With rings on her fingers, and bells on her toes,
She shall have music wherever she goes.

Three wise men of Gotham
Went to sea in a bowl;
If the bowl had been stronger,
My song had been longer.

Little Boy Blue, come blow your horn,
The sheep's in the meadow, the cow's in the corn;
What! is this the way you mind your sheep,
Under the hay-cock, fast asleep?



Jack and Jill went up the hill,
To fetch a pail of water;
Jack fell down and broke his crown,
And Jill came tumbling after.

Up Jack got, and home did trot,
As fast as he could caper;
And went to bed, to mend his head
With vinegar and brown paper.

Some little mice sat in a barn to spin,
Pussy came by and dropped her head in;
"Shall I come in and cut your threads off?"
"Oh, no, kind ma'am, you will snap our heads off!"

Curly locks! curly locks! wilt thou be mine?
Thou shalt not wash the dishes, nor yet feed the swine.
But sit on a cushion and sew a fine seam,
And feed upon strawberries, sugar and cream!

Little Tom Tucker
Sings for his supper.
What shall he eat?
White bread and butter.
How will he cut it,
Without e'er a knife?
How will he be married,
Without e'er a wife?

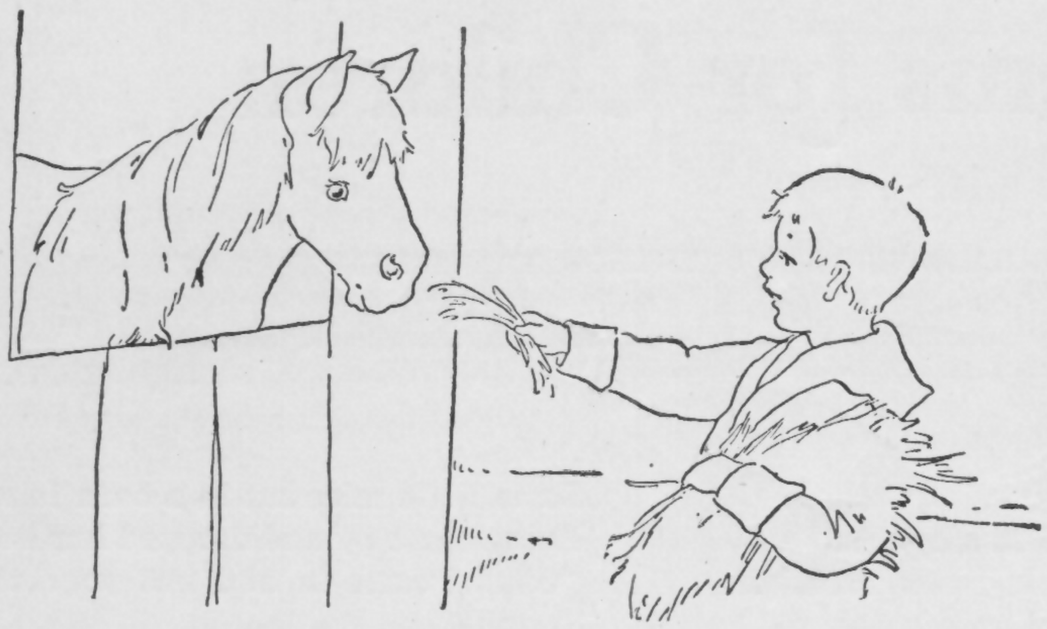
There was a man in our town,
And he was wondrous wise;
He jumped into a bramble bush,
And scratched out both his eyes,
And when he saw his eyes were out,
With all his might and main
He jumped into another bush,
And scratched them in again.

The man in the moon,
Came down too soon,
To ask the way to Norwich;
He went by the south,
And burnt his mouth,
With eating cold pease-porridge.

There was an old woman who lived in a shoe,
She had so many children she didn't know what to do;
She gave them some broth without any bread,
She whipped them all soundly and put them to bed.

The rimes and jingles of Mother Goose are the true inheritance of childhood. No child's education is complete without them.

I had a little pony,
His name was Dapple-gray,
I lent him to a lady,
To ride a mile away;



She whipp'd him, she lash'd him,
She rode him through the mire;
I would not lend my pony now
For all the lady's hire.

Pussy cat, pussy cat,
Where have you been?
I've been to London,
To visit the queen.
Pussy cat, pussy cat,
What did you there?
I frightened a little mouse
Under her chair.

Old King Cole
Was a merry old soul
And a merry old soul was he;
He called for his pipe,
And he called for his bowl,
And he called for his fiddlers three.

Every fiddler, he had a fine fiddle,
And a very fine fiddle had he;
Twee tweedle dee, tweedle dee, went the fiddlers.
O, there's none so rare,
As can compare
With Old King Cole and his fiddlers three!

I'll tell you a story
About Mother Morey,
And now my story's begun,
I'll tell you another
About her brother,
And now my story's done.

The lion and the unicorn
Were fighting for the crown;
The lion beat the unicorn
All about the town.
Some gave them white bread,
And some gave them brown;
Some gave them plum-cake,
And sent them out of town.

Little Jack Horner sat in a corner,
Eating his Christmas pie;
He put in his thumb, and pulled out a plum,
And said, "What a good boy am I!"

Jack Sprat could eat no fat,
His wife could eat no lean,
And so between them both
They licked the platter clean.

One misty, moisty morning,
When cloudy was the weather,
I chanced to meet an old man clothed all in leather.
He began to compliment, and I began to grin,
"How do you do? and how do you do?
And how do you do again?"

If all the world were apple-pie,
And all the sea were ink,
And all the trees were bread and cheese,
What should we have to drink?

There was a crooked man,
And he went a crooked mile,
He found a crooked sixpence
Against a crooked stile,
He bought a crooked cat,
Which caught a crooked mouse,
And they all lived together
In a little crooked house.

Hickory, dickory, dock,
The mouse ran up the clock.
The clock struck one,
And down he run,
Hickory, dickory, dock.

Ba-a, ba-a, black sheep,
have you any wool?
Yes, marry, have I, three bags full;
One for my master, one for my dame,
And one for the little boy that lives in the lane.

Hush-a-bye-baby
Upon the tree top,
When the wind blows
The cradle will rock,

When the bough breaks
The cradle will fall,
Down tumbles baby,
Bough, cradle, and all.

Ding, dong, bell!
Pussy's in the well.
Who put her in?
Little Tommy Green.
Who pulled her out?
Great Johnny Stout.
What a naughty boy was that,
To drown poor pussy-cat,
Who never did him any harm,
But killed the mice in his father's barn!

Sing a song of sixpence,
A pocket full of rye;
Four and twenty blackbirds
Baked in a pie.

When the pie was open'd
The birds began to sing;
Was not that a dainty dish
To set before the king?

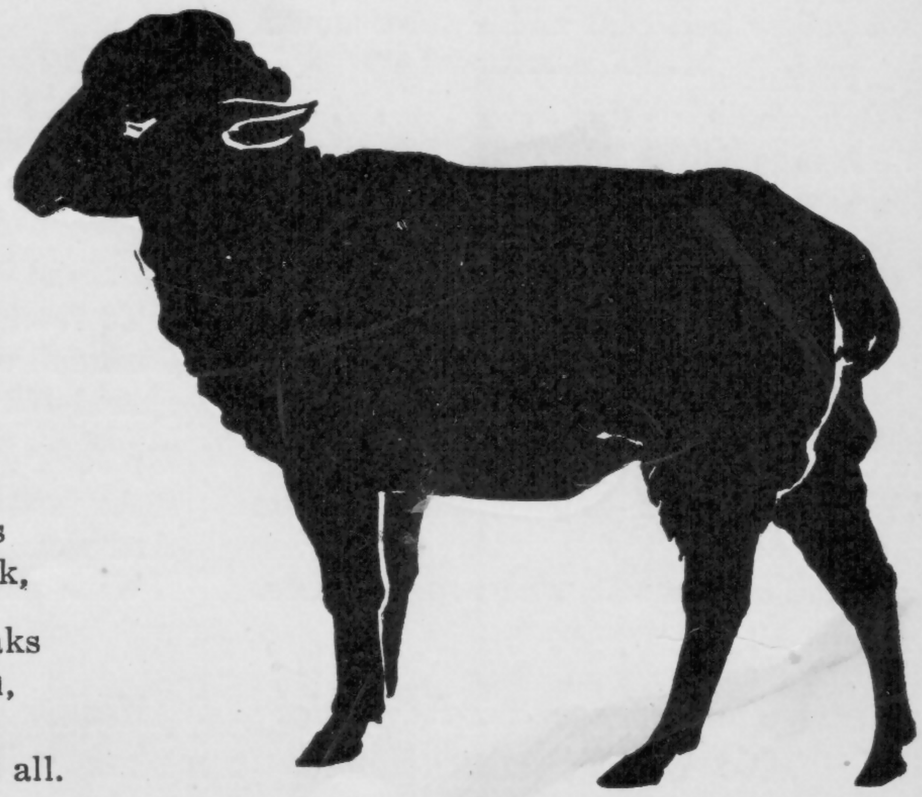
The king was in his counting-house
Counting out his money;
The queen was in the parlor
Eating bread and honey;

The maid was in the garden
Hanging out the clothes;
There came a little blackbird
And snipt off her nose.

Little fishey in a brook
Daddy catch him with a hook,
Mamma fry him in a pan,
Baby eat him like a man.

Pease porridge hot,
Pease porridge cold,
Pease porridge in the pot,
Nine days old;
Some like it hot,
Some like it cold,
Some like it in the pot,
Nine days old.

One, two,
Buckle my shoe;
Three, four,
Shut the door;
Five, six,
Pick up sticks;
Seven, eight,
Lay them straight;



Nine, ten,
A good fat hen;
Eleven, twelve,
A man must delve.
Thirteen, fourteen,
Maids a-courtin';
Fifteen, sixteen,
Maids a-kissin';
Seventeen, eighteen,
Maids a waitin';
Nineteen, twenty,
That is plenty.

One, two, three, four, five!
I caught a hare alive;
Six, seven, eight, nine, ten!
I let it go again.

Simple Simon met a pieman
Going to the fair;
Said Simple Simon to the pieman,
"Pray let me taste your ware."

Says the pieman to Simple Simon,
"Show me first your penny;"
Says Simple Simon to the pieman,
"Indeed, I haven't any."

Simple Simon went a-fishing
For to catch a whale;
All the water he had got
Was in his mother's pail.

Peter Piper picked a peck of pickled peppers;
A peck of pickled peppers Peter Piper picked;
If Peter Piper picked a peck of pickled peppers,
Where are the peck of pickled peppers Peter Piper picked?

Tom he was a piper's son,
He learnt to play when he was young,
But all the tune that he could play,
Was "Over the hills and far away."

There was an old woman toss'd up in a basket
Nineteen times as high as the moon;
But where she was going, I couldn't but ask it,
For in her hand she carried a broom.

"Old woman, old woman, old woman," quoth I,
"O whither, O whither, O whither, so high?"
"To brush the cobwebs off the sky!"
"Shall I go with thee?" "Aye, by and by."

This is the house that Jack built.

This is the malt,
that lay in the house that Jack built.

This is the rat, that ate
the malt,
that lay in the house
that Jack built.

This is the cat, that
chased the rat,
that ate the malt,
that lay in the house
that Jack built.

This is the dog, that worried the cat,
that chased the rat,
that ate the malt,
that lay in the house
that Jack built.

This is the cow
with crumpled horn,
that tossed the dog,
that worried the cat,
that chased the rat,
that ate the malt,
that lay in the house
that Jack built.

This is the maiden all
forlorn,
that milked the cow
with crumpled horn,
that tossed the dog,
that worried the cat,
that chased the rat,
that ate the malt,
that lay in the house
that Jack built.

This is the youth all tattered
and torn,
that kissed the maiden
all forlorn,
that milked the cow
with crumpled horn,
that tossed the dog,
that worried the cat,
that chased the rat,
that ate the malt,
that lay in the house
that Jack built.

This is the priest
all shaven and shorn,
that married the youth
all tattered and torn,
that kissed the maiden
all forlorn,
that milked the cow
with crumpled horn,
that tossed the dog,
that worried the cat,
that chased the rat,
that ate the malt,
that lay in the house
that Jack built.

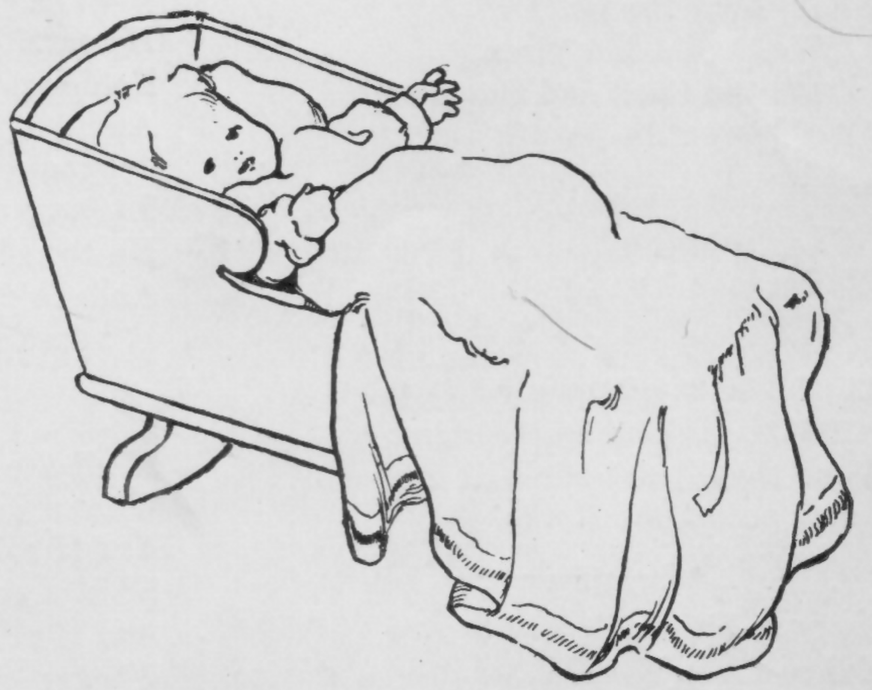
This is the cock
that crowed in the morn,
to wake the priest
all shaven and shorn,
that married the youth
all tattered and torn,
that kissed the maiden
all forlorn,
that milked the cow
with crumpled horn,
that tossed the dog,
that worried the cat,
that chased the rat,
that ate the malt,
that lay in the house
that Jack built.

As I was going to St. Ives,
I met a man with seven wives;
Every wife had seven sacks,
Every sack had seven cats,
Every cat had seven kits;
Kits, cats, sacks, and wives,
How many were going to St. Ives?

If wishes were horses,
Beggars would ride;
If turnips were watches,
I'd wear one by my side.

Solomon Grundy,
Born on Monday,
Christened on Tuesday,
Married on Wednesday,
Took ill on Thursday,
Worse on Friday,
Died on Saturday,
Buried on Sunday.
This is the end
Of Solomon Grundy.

Bye, baby Bunting,
Father's gone a-hunting,
Gone to get a rabbit skin
To wrap the baby Bunting in.



For want of a nail, the shoe was lost;
For want of the shoe, the horse was lost;
For want of the horse, the rider was lost;
For want of the rider, the battle was lost;
For want of the battle, the kingdom was lost;
And all from the want of a horseshoe nail.

Who killed Cock Robin?
"I," said the Sparrow,
"With my bow and arrow;
I killed Cock Robin."

Who saw him die?
"I," said the Fly,
"With my little eye;
I saw him die."

Who caught his blood?
"I," said the Fish,
"With my little dish;
I caught his blood."

Who made his shroud?
"I," said the Beetle,
"With my little needle;
I made his shroud."

Who'll be the parson?
"I," said the Rook;
"With my little book;
I'll be the parson."

Who'll dig his grave?
"I," said the Owl,
"With my spade and shovel;
I'll dig his grave."

Who'll be the clerk?
"I," said the Lark,
"If 'tis not in the dark;
I'll be the clerk."

Who'll carry him to the grave?
"I," said the Kite,
"If 'tis not in the night;
I'll carry him to the grave."

Who'll be the chief mourner?
"I," said the Dove,
"Because of my love;
I'll be chief mourner."

Who'll sing a psalm?
"I," said the Thrush,
As she sat in a bush;
"I'll sing a psalm."

Who'll bear the pall?
"We," said the Wren,
Both the Cock and the Hen;
"We'll bear the pall."

Who'll toll the bell?
"I," said the Bull,
"Because I can pull."
So, Cock Robin, farewell.

All the birds of the air
Fell to sighing and sobbing
When they heard the bell toll
For poor Cock Robin.

Early to bed and early to rise
Makes a man healthy, wealthy and wise.

Sneeze on Monday, sneeze for danger;
Sneeze on Tuesday, kiss a stranger;
Sneeze on Wednesday, get a letter;
Sneeze on Thursday, something better;
Sneeze on Friday, sneeze for sorrow;
Sneeze on Saturday, joy tomorrow.

April showers
Make May flowers.

There was a little man,
And he had a little gun,
And his bullets were made of lead, lead, lead;
He went to the brook
And he saw a little duck,
And he shot it right through the head, head, head.

He carried it home
To his old wife Joan,
And bid her a fire for to make, make, make;
To roast the little duck
He had shot in the brook,
And he'd go and fetch her the drake, drake, drake.

If all the seas were one sea,
What a *great* sea that would be!
And if all the trees were one tree,
What a *great* tree that would be!
And if all the axes were one axe,
What a *great* axe that would be!
And if all the men were one man,
What a *great* man he would be!
And if the *great* man took the *great* axe,
And cut down the *great* tree,
And let it fall into the *great* sea,
What a splish splash *that* would be!

What are little boys made of, made of;
What are little boys made of?
"Snaps and snails, and puppy-dogs' tails;
And that's what little boys are made of, made of."

What are little girls made of, made of;
What are little girls made of?
"Sugar and spice, and all that's nice;
And that's what little girls are made of, made of."

Three children sliding on the ice,
Upon a summer's day;
As it fell out, they all fell in,
The rest they ran away.

Now had these children been at home,
Or sliding on dry ground,
Ten thousand pounds to one penny,
They had not all been drown'd.

You parents all that children have,
And you that have got none,
If you would keep them safe abroad,
Pray keep them safe at home.

Goosey, goosey, gander,
Where shall I wander?
Upstairs, downstairs,
And in my lady's chamber.

There I met an old man
That would not say his prayers;
I took him by the left leg,
And threw him downstairs.

The Queen of Hearts
She made some tarts,
All on a summer's day;
The Knave of Hearts
He stole those tarts,
And took them clean away.

The King of Hearts
Called for the tarts,
And beat the Knave full sore;
The Knave of Hearts
Brought back the tarts,
And vowed he'd steal no more.

For every evil under the sun,
There is a remedy, or there is none.
If there be one, try and find it,
If there be none, never mind it.

Her Family

I have a great big fam'ly,
  It's such a dreadful care!
From early morn till evening,
  I have no time to spare.

Now there's my boy doll, Charlie,
  He always runs away.
An *hour*, at least, I hunted
  For Charlie boy, today.

The twins, Marie and Mary,
  Black Joe, and Sailor Jack,
Are sure to get in mischief,
  If I but turn my back!

Mabelle, my Paris dolly,
  Is such a vain young girl;
She always wants new dresses
  And hair kept all in curl.

Here's Pearl, my poor lame dolly,
  Now, since she had that fall,
I have to tell her stories,—
  I get no rest at all.

Then Araminta's nervous,
  And little baby Ruth
Just cries and frets and fusses,
  She must be cutting a tooth!

Sometimes I really wonder,
  Oh, will my hair turn gray!
But still, I love my children,
  I couldn't give *one* away!

"I have a great big fam'ly"

They Didn't Think

Once a trap was baited
  With a piece of cheese;
It tickled so a little mouse
  It almost made him sneeze.
An old rat said, "There's danger,
  Be careful where you go!"
"Nonsense!" said the other,
  "I don't think you know!"
So he walked in boldly—
  Nobody in sight;
First he took a nibble,
  Then he took a bite;
Close the trap together
  Snapped as quick as wink,
Catching mousey fast there,
  'Cause he didn't think.

Once a little turkey,
  Fond of her own way,
Wouldn't ask the old ones
  Where to go or stay.
She said, "I'm not a baby,
  Here I am half-grown;
Surely I am big enough
  To run about alone!"
Off she went, but somebody
  Hiding saw her pass;
Soon like snow her feathers
  Covered all the grass.
So she made a supper
  For a sly young mink,
'Cause she was so headstrong
  That she wouldn't think.

Once there was a robin
  Lived outside the door,
Who wanted to go inside
  And hop upon the floor.
"No, no," said the mother,
  "You must stay with me;
Little birds are safest
  Sitting in a tree."
"I don't care," said Robin,
  And gave his tail a fling,
"I don't think the old folks
  Know quite everything."
Down he flew, and Kitty seized him,
  Before he'd time to blink;
"Oh," he cried, "I'm sorry,
  But I didn't think."

Now, my little children,
  You who read this song,
Don't you see what trouble
  Comes of thinking wrong?
And can't you take a warning
  From their dreadful fate
Who began their thinking
  When it was too late?
Don't think there's always safety
  When no danger shows;
Don't suppose you know more
  Than anybody knows;
But when you're warned of ruin,
  Pause upon the brink,
And don't go under headlong,
  'Cause you didn't think.

—*Phœbe Caru*

Jack Frost

"Some one has been in the garden,
  Nipping the flowers so fair;
All the green leaves are withered;
  Now, who do you think has been there?

"Some one has been in the forest,
  Cracking the chestnut burrs;
Who is it dropping the chestnuts,
  Whenever a light wind stirs?

"Some one has been on the hilltop,
  Chipping the moss-covered rocks;
Who has been cracking and breaking
  Them into fragments and blocks?

"Some one has been at the windows,
  Marking on every pane;
Who made those glittering pictures
  Of lace-work, fir-trees, and grain?

"Some one is all the time working
  Out on the pond so blue,
Bridging it over with crystal;
  Who is it, now? Can you tell who?

"While his good bridge he is building,
  We will keep guard at the gate;
And when he has it all finished,
  Hurrah for the boys that can skate!

"Let him work on: we are ready;
  Not much for our fun does it cost!
Three cheers for the bridge he is making!
  And three, with a will, for Jack Frost!"

—*Selected.*

When the Little Boy Ran Away

When the little boy ran away from home,
  The birds in the tree tops knew,
And they all sang "Stay!"
But he wandered away
  Under the skies of blue.
And the wind came whispering from the tree,
"Follow—follow me!"
And it sang him a song that was soft and sweet,
And scattered the roses before his feet
  That day—that day
  When the little boy ran away.

The violet whispered: "Your eyes are blue
  And lovely and bright to see;
And so are mine, and I'm kin to you,
  So dwell in the light with me!"
But the little boy laughed, while the wind in glee
Said "Follow me—follow me!"
And the wind called the clouds from their home in the skies,
And said to the violet, "Shut your eyes!"
  That day—that day
  When the little boy ran away.

Then the wind played leapfrog over the hills
  And twisted each leaf and limb;
And all the rivers and all the rills.
  Were foaming mad with him!
And it was dark as darkest night could be,
But still came the wind's voice, "Follow me!"
And over the mountain and up from the hollow
Came echoing voices with "Follow him, follow!"
  That awful day
  When the little boy ran away.

Then the little boy cried, "Let me go—let me go!"
  For a scared, scared boy was he!
But the thunder growled from the black cloud, "No!"
  And the wind roared, "Follow me!"
And an old gray Owl from a tree top flew,
Saying, "Who are you-oo? Who are you-oo?"
And the little boy sobbed, "I'm lost away,
And I want to go where my parents stay!"
  Oh! the awful day
  When the little boy ran away.

Then the Moon looked out from the cloud and said,
  "Are you sorry you ran away?
If I light you home to your trundle-bed,
  Will you stay, little boy, will you stay?"
And the little boy promised—and cried and cried—
He would never leave his mother's side;
And the Moonlight led him over the plain,
And his mother welcomed him home again,
  But oh! what a day
  When the little boy ran away!

The Wind

I saw you toss the kites on high
And blow the birds about the sky;
And all around I heard you pass,
Like ladies' skirts across the grass—
  O wind, a-blowing all day long,
  O wind, that sings so loud a song!

I saw the different things you did,
But always you yourself you hid.
I felt you push, I heard you call,
I could not see yourself at all—
  O wind, a-blowing all day long,
  O wind, that sings so loud a song!

O you that are so strong and cold,
O blower, are you young or old?
Are you a beast of field and tree,
Or just a stronger child than me?
  O wind, a-blowing all day long,
  O wind, that sings so loud a song!

—Robert Louis Stevenson.

Aunt Molly

Have you seen my Aunt Molly?—ma's sister, you know;
She's the fairy at home—all that know her say so;
Always ready and willing to help a chap through
Any scrape or school work which he's tried and can't do.

If a kite you desire in the shape of a dove,
If you want a few buttons sewn on your new glove,
If your jacket's got torn in a long paper chase,
Or your hat's lost the straw rim that shaded your face,

You just try my Aunt Molly; she'll make it all right.
Soon her handy thin fingers will rig you a kite,
Quick the buttons fly on, your jacket holes close,
And an elegant hat-brim o'ershadows your nose.

If you're feeling down-hearted or down in the dumps,
If you've just had the measles or just got the mumps,
Good Aunt Molly's queer stories will brighten and cheer,
And her bright beaming smile make you vote her a dear.

Auntie Molly ne'er laughs when one makes a mistake,
And she knows how a trick or a good joke to take.
Most grown folks, you know, either scowl or look black
When one chalks their top hat or puts ice down their back.

Auntie Molly herself was once young, so she said,
And she's filled up with sympathy, up to the head,
For she's sorry if you are, knows just how you feel,
And would rather be punished than you a great deal.

So we all love Aunt Molly, and couldn't go right
Without Auntie to steer us and keep us in sight.
She's a dear little duck, quite a darling, I vow.
So three cheers for Aunt Molly, the best aunt I know.

Appleseed John

Poor Johnny was bended well-nigh double
With years of care, and toil, and trouble;
But his large old heart still felt the need
Of doing for others some kindly deed.

"But what can I do?" old Johnny said;
"I, who work so hard for daily bread?
It takes heaps of money to do much good;
I am far too poor to do as I would."

The old man sat thinking deeply a while,
Then over his features gleamed a smile;
And he clapped his hands with childish glee,
And said to himself, "There's a way for me!"

He worked and he worked with might and main
But no one knew the plan in his brain.
He took the ripe apples in pay for chores,
And carefully cut from them all the cores.

With a bag full of cores he wandered away,
And no man saw him for many a day.
With knapsack over his shoulder slung,
He marched along and whistled and sung.

He seemed to roam with no object in view,
Like one who had nothing on earth to do:
But, journeying thus over prairies wide,
He paused now and then, and his bag untied.

Children should carry a heart full of the fresh and delightful associations and memories connected with poetry hours to brighten mature years. They should develop their memories while they have memories to develop.—Mary E. Burt.

With pointed cane, deep holes he would bore,
And in every hole he planted a core;
Then covered them well and left them there,
In keeping of sunshine, rain and air.

Sometimes for days he waded through grass,
And saw not a living creature pass;
And often, when sinking to sleep in the dark,
He heard the owls hoot, and prairie-dogs bark.

Sometimes a log cabin came to view,
Where Johnny was sure to find jobs to do,
By which he gained stores of bread and meat,
And welcome rest for his weary feet.

He had full many a story to tell,
And goodly hymns that he sang right well;
He tossed up the babies and joined the boys
In many a game, full of fun and noise.

And he seemed so hearty in work or play,
Men, women and boys all urged him to stay;
But he always said, "I have something to do,
And I must go on to carry it through."

The boys, who were sure to follow him round,
Soon found what it was that he put in the ground;
And so, as time passed, and he traveled on,
Everyone called him "Old Appleseed John."

Whenever he'd used the whole of his store,
He went into cities and worked for more;
Then he marched back to the wilds again,
And planted seed on hillside and plain.

In cities, some said the old man was crazy,
While others said he was only lazy;
But he took no notice of jibes and jeers;
He knew he was working for future years.

So he kept on traveling far and wide,
Till his old limbs failed him and he died.
He said at last, " 'Tis comfort to feel
I've done good in the world, though not a great deal."

Weary travelers, journeying west,
In the shade of his trees find a pleasant rest;
And they often start with glad surprise
At the rosy fruit that round them lies.

And if they inquire whence came such trees,
Where not a branch once swayed in the breeze,
The answer still comes, as they travel on,
"The trees were planted by Appleseed John."

"Where the gray trout lies asleep."

Long Ago

Many, many years ago,
Grandma lived—she told me so—
In a great big house, she said;
And she slept upon a bed
Tall and high—so big, almost
In it children might be lost.
Round the house sweet flowers grew,
Herbs, too,—thyme and sage and rue.

High-backed chairs, a queer old spinet,
Fireplace, with great logs within it,
Tables, too, with spider legs;
Cups and saucers thin as eggs;
Spinning-wheel that spun their thread,
These were in the house, she said.

Grandma wore a flowered gown,
And a little hat tied down;
Shoes with red rosettes she wore;
Open was her gown before,
Showed a skirt of quilted stuff;
Then she was dressed quite fine enough.
All these things to church she wore,
But at school a pinafore.

Grandma called her teacher "Dame,'
Wasn't that a funny name?
Folks then traveled in a stage,
And it seemed to take an age
Just to go a little way;
Now, it wouldn't take a day.

Grandma says: "My, how times change!
Now-a-days things seem so strange!"
Will it seem as strange to me
When I am as old as she?
Will I tell grandchildren so?
Will they call this "long ago?"

A Boy's Song

Where the pools are bright and deep,
Where the gray trout lies asleep,
Up the river and o'er the lea,
That's the way for Billy and me.

Where the blackbird sings the latest,
Where the hawthorn blooms the sweetest,
Where the nestlings chirp and flee,
That's the way for Billy and me.

Where the mowers mow the cleanest,
Where the hay lies thick and greenest;
There to trace the homeward bee,
That's the way for Billy and me.

Where the hazel bank is steepest,
Where the shadow falls the deepest,
Where the clustering nuts fall free,
That's the way for Billy and me.

Why the boys should drive away
Little sweet maidens from their play,
Or love to banter and fight so well,
That's the thing I never could tell.

But this I know, I love to play,
Through the meadow, among the hay,
Up the water and o'er the lea,
That's the way for Billy and me.

—*James Hogg.*

The Stories Mother Tells

When evening comes I love to sit
  Upon my Mother's knee,
And snuggle down and listen to
  The tales she tells to me.
Her voice is just as clear and sweet
  As music made by bells,
And then, indeed, how splendid are
  The stories Mother tells.

There's "Goldilocks," and "Cinderella;"
  "The Babies in the Wood,"
"The Beanstalk Boy" and wee "Tom Thumb,"
  And merry "Robin Hood."
I hear of kings, of animals,
  Of fairies in their dells;
I cannot help but listen to
  The stories Mother tells.

But then for Sunday afternoons
  She has a different kind,
The wondrous things that Jesus did
  To sick, and lame, and blind;
On Joseph, David, Daniel, too,
  Her tongue so often dwells;
For these I love the best of all
  The stories Mother tells.

When I grow up I guess I'll be
  A mother, too, some day,
And my own little baby girl
  Upon my knees will play;
Then she will ask for stories too,
  And coax and tease by spells,
And so I'll tell her o'er again
  The stories Mother tells.

—*Donald A. Fraser.*

My Chum

I like to play with my chum;
  He's such a cheerful chap;
He's never angry if in play
  You take his coat or cap.

He has a smile for everyone,
  And doesn't have the blues;
And so you're glad to have him come,
  He's like some happy news.

And yet he can be serious, too,
  Where there are tasks to do
That need a lot of time and thought
  To put them rightly through.

Another thing about my chum—
  He keeps his promises;
And you can bank with feeling sure
  On everything he says.

He has some faults, but in these ways
  He's fair and square and true:
He's just the sort of chum to have—
  The kind you call "true-blue!"

—*Arthur Wallace Peach.*

The Duck and the Kangaroo

Said the Duck to the Kangaroo,
  "Good gracious! how you hop
Over the fields and the water too,
  As if you would never stop!
My life is a bore in this nasty pond;
And I long to go out in the world beyond;
  I wish I could hop like you,"
  Said the Duck to the Kangaroo.

"Please give me a ride on your back,"
  Said the Duck to the Kangaroo:
"I would sit quite still, and say nothing but 'Quack'
  The whole of the long way through;
And we'd go to the Dee, and the Jelly Bo Lee,
Over the land and over the sea.
  Please take me a ride! Oh, do!"
  Said the Duck to the Kangaroo.

Said the Kangaroo to the Duck,
  "This requires some little reflection.
Perhaps, on the whole, it might bring me luck:
  And there seems but one objection;
Which is, if you'll let me speak so bold,
Your feet are unpleasantly wet and cold,
  And would probably give me the roo-Matiz," said the Kangaroo.

Said the Duck, "As I sat on the rocks,
  I have thought over that completely;
And I bought four pairs of worsted socks,
  Which fit my webfeet neatly;
And, to keep out the cold, I've bought a cloak;
So the wet and the heat will be only a joke!
  As I follow my own dear, true
  Love of a Kangaroo."

Said the Kangaroo, "I'm ready
  All in the moonlight pale,
And to balance me well, dear Duck, sit steady,
  And quite at the end of my tail."
So away they went with a hop and a bound;
And they hopped the whole world three times round,
  And who so happy, oh! who,
  As the Duck and the Kangaroo?

—*Edward Lear.*

A Problem

Sandy and Ned were brothers;
  Ned was older than Sandy,
And they were busy dividing
  A stick of peppermint candy.

Ned was earnestly trying,
  To make the division true,
And he marked the place with a fishhook
  Where the stick ought to break in two.

But, alas, for little Sandy
  And his poor, painstaking brother!
'Twas a long and short division—
  One piece longer than the other.

Ned gravely looked at the pieces,
  And their quite unequal length,
And he wrestled with the problem
  With all his mental strength.

And at last he said: "Oh, Sandy!
  I can make it come out right,
If I take the piece that's longest
  And bite off just one bite."

Their four eyes beamed and brightened,
  At this plan so very handy
Of disposing of the problem
  And distributing the candy.

So Ned ate the pieces even—
  'Twas the simplest way to do it—
And he cheated little Sandy,
  And they neither of them knew it.

Foreign Children

Little Indian, Sioux or Crow,
Little frosty Eskimo,
Little Turk or Japanee,
O! don't you wish that you were me?

You have seen the scarlet trees
And the lions over the seas;
You have eaten ostrich eggs,
And turned the turtles off their legs.

Such a life is very fine,
But it's not so nice as mine;
You must often, as you trod,
Have wearied *not* to be abroad.

You have curious things to eat,
I am fed on proper meat;
You must dwell beyond the foam,
But I am safe and live at home.

Little Indian, Sioux, or Crow,
Little frosty Eskimo,
Little Turk or Japanee,
O! don't you wish that you were me?

—*Robert Louis Stevenson.*

The Whispering Birch

Long ago there lived a princess,
  Slender, graceful, very fair,
Clad in rare and costly raiment,
  Jewels gleaming in her hair.

Green the robes she wore in summer;
  But in autumn, we are told,
With her own fair hands the princess
  Wove a robe of shining gold.

But alas! this lovely princess—
  So the quaint old story goes—
Whispered, whispered, always whispered,
  Till in anger there arose

One who long had frowned upon her,—
  Queen of all the fairies she,—
And with magic wand uplifted
  Changed her to a slender tree.

"Whisperer!" cried the angry fairy,
  "Tell your secrets to the breeze;
Evermore within the forest
  Must you stand among the trees."

So she stands, so tall and slender,
  Whispering, whispering, day and night;
Wearing still green robes in summer,
  And in autumn golden bright.

Bed in Summer

In winter I get up at night
And dress by yellow candle-light.
In summer, quite the other way,
I have to go to bed by day.

I have to go to bed and see
The birds still hopping on the tree,
Or hear the grown-up people's feet
Still going past me in the street.

And does it not seem hard to you,
When all the sky is clear and blue,
And I should like so much to play,
To have to go to bed by day?

—*Robert Louis Stevenson.*

"Hurrah for the Flag!"

There are many flags in many lands;
  There are flags of every hue;
But there is no flag, however grand,
  Like our own Red, White and Blue.

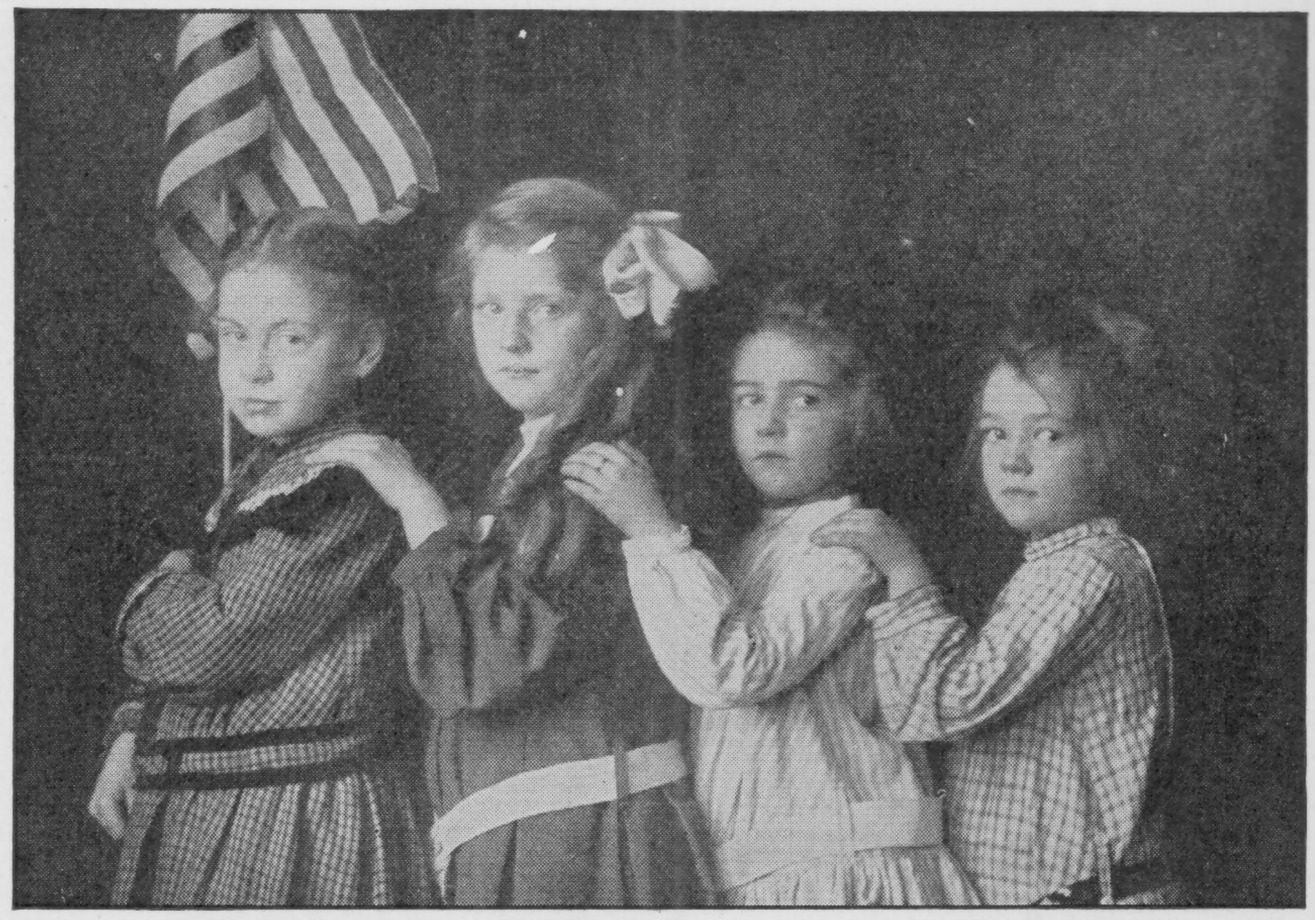
I know where the prettiest colors are,
  And I'm sure if I only knew
How to get them here, I'd make a flag
  Of glorious Red, White and Blue.

I would cut a piece from an evening sky
  When the stars were shining through,
And use it, just as it was on high,
  For my stars and field of blue.

Then I'd take a part of a fleecy cloud,
  And some red from a rainbow, bright,
And put them together, side by side,
  For my stripes of red and white.

We shall always love the stars and stripes,
  And I mean to be ever true
To this land of ours and the dear old flag,
  The Red, the White and the Blue.

Then hurrah for the flag! our country's flag!
  Its stripes and white stars, too;
There is no flag in any land
  Like our own Red, White and Rlue.



"We shall always love the Stars and Stripes."

Speaking Pieces

Every Friday afternoon we stop our recitation
And all the pupils fold their hands and wait in expectation
To hear the great rhetoricals, the speaking and debate,
With which a school against its will must always celebrate.

Now where the good is, I don't know; I never understood.
Although I've tried all different plans that anybody could.
I've spoken pieces by the score, and given an oration,
But I must say I much prefer some other occupation.

To stand up straight before the school, your eyes fixed on the ceiling,
Your knees a-shaking quick and fast, or else without much feeling,
When sometimes words are clear in mind and sometimes they are not,—
Oh, it is simply awful when you know that you've forgot!

They try to urge you on to speak, they tell of Patrick Henry,
Demosthenes and all the rest, their names would task your memory,
They tell how they could speak and talk 'till folks were moved to weeping—
Well I've felt that way lots of times about my public speaking.

Your voice it either quavers and sounds real low and weak,
Or else it rises in the scale and winds up with a squeak;
Your hands feel big and red and long, and hang limp by your side,
Your eyes seem sort of red and small, or else they're staring wide,

You kind o' want to giggle and you kind o' want to cry,
You kind o' want to do your best, but cannot if you try;
You dread it long beforehand, and you feel worse when it's done,
And you wish that speaking pieces had never been begun.

I am, perhaps, peculiar, but I would dare to say
There isn't any boy or girl who does not feel that way;
But I suppose the teachers know and if it's for the best
I'll take my turn at speaking along with all the rest. —*Myrtle Barber.*

Casabianca

The boy stood on the burning deck,
  Whence all but he had fled;
The flame that lit the battle's wreck
  Shone round him o'er the dead.

Yet beautiful and bright he stood,
  As born to rule the storm;
A creature of heroic blood,
  A proud though childlike form.

The flames rolled on—he would not go
  Without his father's word;
That father, faint in death below,
  His voice no longer heard.

He called aloud, "Say, father, say
  If yet my task is done?"
He knew not that the chieftain lay
  Unconscious of his son.

"Speak, father!" once again he cried,
  "If I may yet be gone!"
And but the booming shots replied,
  And fast the flames rolled on.

Upon his brow he felt their breath,
  And in his waving hair;
And looked from the lone post of death
  In still, yet brave, despair.

And shouted but once more aloud,
  "My father, must I stay?"
While o'er him fast, through sail and shroud,
  The wreathing fires made way.

They wrapped the ship in splendor wild,
  They caught the flag on high,
And streamed above the gallant child
  Like banners in the sky.

Then came a burst of thunder sound—
  The boy—oh! where was he?
Ask of the winds that far around
  With fragments strewed the sea;

With mast, and helm, and pennon fair,
  That well had borne their part—
But the noblest thing that perished there
  Was that young faithful heart.

—*Felicia Hemans.*

The Spelling Match

They'd all sat down but Bess and me,
  I surely thought I'd win—
To lose on such an easy word,
  It was a shame and sin!
We spelled the longest in the book,
  The hardest ones right through,
"Xylography," and "pachyderm,"
  And "gneiss," and "phthisis," too.

I spelled "immalleability,"
  "Pneumonia"—it was fun!
"Phlebotomy," and "zoophyte,"
  Each long and curious one.
The teacher gave a right queer smile
  When Bess spelled "aquarelle,"
And backward quick she turned the leaves,
  And then she gave out "spell."

I'm sure I never stopped to think
  About that "double l,"
It seemed like such an easy word—
  But one can never tell—
"S-p-e-l," I spelled it,
  And how they all did laugh!
And the teacher said: "I think, my dear,
  Too easy 'twas by half."

Now, Bessie was not proud or mean:
  She said: "No wonder, Jane,
For we were thinking of *big* words;
  You'd spell it right, again."
I'm glad that it was Bess that won,
  And not those others. Well!
If I did miss one little word,
  I showed that I could spell.

"He tells me lots of stories"

When Grandpa Wore His Uniform

I've got the bestest Gran'pa
  You ever hear about:
We always go to hear the band
  Whenever it comes out.
He tells me lots of stories
  About the drefful wars,
An' he was in them, too, he said,
  An' he's got awful scars.
An' when they get the flowers
  To put on soldiers' graves
We dust bring out our nicest flag,
  An' 'en he sings an' waves
The Stars an' Stripes, an' we dust march,
  All dressed up fine an' gay:
For Gran'pa wears his uniform
  On Decoration Day.

An' after that we all go home
  An' sit about an' talk:
Though sometimes I dust wish an' wish
  We'd take another walk.
For Gran'pa does dust look so fine,
  His dear ol' head so gray
Is held so proud when we go out
  This lovely day in May.
For oh, his clothes are extra fine,
  All blue with buttons gay,
For Gran'pa wears his uniform
  On Decoration Day.

My Gran'pa says he's growing old
  An' by an' by will come
The sound of "taps" to call him home,
  An' beat of muffled drum.
An' 'en 'at I must be a man,
  An' 'at I mustn't cry,
Dust 'cause my Gran'pa's gone away
  To live up in the sky.
An' 'at when on Memorial Day
  We wreathe our garlands bright,
An' place the flag of liberty
  O'er those who fought for right,
'At I must put a flag by him,
  Remembering alway
How Gran'pa wore his uniform
  On Decoration Day.

—*Helen Bingham.*

When the Teacher Gets Cross

When the teacher gets cross, and her blue eyes gets black,
And her pencil comes down on the desk with a whack,
We chilluns in class sits up straight in line,
As if we had rulers instead of a spine!
It's scary to cough, and it's not safe to grin,
When the teacher gets cross, and the dimples goes in.

When the teacher gets cross, the tables gets mixed,
And the ones and the sevens begin playing tricks.
The pluses and minuses is just little smears,
When the cry-babies cry all their slates up with tears.
The figgers won't add, and they act up like sin,
When the teacher gets cross, and the dimples goes in.

When the teacher gets cross, the reading gets bad,
The lines jingle round till the chilluns is sad,
And Billyboy puffs and gets red in the face,
As if he and the lesson were running a race!
Till she hollers out, "Next!" as sharp as a pin—
When the teacher gets cross, and the dimples goes in.

When the teacher gets good her smile is so bright
The tables gets straight, and the reading gets right.
The pluses and minuses comes trooping along,
And figgers adds up and stops being wrong;
And we chilluns would like (but we dassent) to shout,
When the teacher gets good, and the dimples comes out.

Rosebud's First Ball

" 'Tis really time you were out, I think,"
  Said Lady Rose to her daughter small,
"So I'll send my invitations round
  And give you, my dear, a splendid ball.

"We'd best decide on our toilet first--
  Your sister Jacqueminot wore dark red,
But you are so much smaller than she,
  I think you must wear pale pink instead.

"Then, whom to invite—we cannot ask all,
  And yet it's exceedingly hard to tell
The flowers from weeds. Indeed, last year
  I snubbed Field Daisy, and now she's a belle.

"We'll ask the Pansies, they're always in
  The best society everywhere;
The Lilies, Heliotropes and Pinks,
  Geraniums, Fuchsias, must sure be there.

"Miss Mignonette is so very plain,
  A favorite, though, I'll put her down;
The Violets, I think, are away,
  They're always the first to leave for town.

"The Larkspurs are such old-fashioned things,
  It's not worth while asking them to come,

The Zinnias are coarse, Bergamots stiff—
The Marigolds better off at home.

"Miss Morning Glory I'd like to ask,
But then she never goes out at night;
She's such a delicate thing, she says
She scarce can bear a very strong light.

"The Verbenas, I know, will be put out
If we don't ask them; the Petunias too,
They're not quite 'au fait,' but then, my dear,
They're such near neighbors, what's one to do?

"I'll make out my list at once, for there
A Butterfly is coming this way;
I'll send out my invitations by him—
He'll go the rounds without delay.

"Dear! dear! to think that tomorrow night
You'll really be out; now listen, my child,
Don't go with your cousin Sweet Brier much;
He's very nice, but inclined to be wild."

Good Morning, Merry Sunshine!

Good morning, merry sunshine!
How did you wake so soon?
You've scared the little stars away,
And shined away the moon.

I saw you go to sleep, last night,
Before I ceased my playing.
How did you get 'way over there?
And where have you been staying?

"I never go to sleep, dear child,
I just go round, to see
My little children of the east,
Who rise, and watch for me.

"I waken all the birds and bees
And flowers, on my way,
And, last of all, the little child
Who stayed out late, to play."

Travel

I should like to rise and go
Where the golden apples grow;—
Where below another sky
Parrot islands anchored lie,
And, watched by cockatoos and goats,
Lonely Crusoes building boats;—
Where in sunshine reaching out,
Eastern cities, miles about,
Are with mosque and minaret
Among sandy gardens set,
And the rich goods from near and far
Hang for sale in the bazaar;—
Where the Great Wall round China goes,
And on one side the desert blows,
And with bell and voice and drum,
Cities on the other hum;—
Where are forests, hot as fire,
Wide as England, tall as a spire,
Full of apes and cocoa-nuts
And the negro hunters' huts;—
Where the knotty crocodile
Lies and blinks in the Nile,
And the red flamingo flies
Hunting fish before his eyes;—
Where in jungles, near and far,
Man-devouring tigers are,
Lying close and giving ear
Lest the hunt be drawing near,
Or a comer-by be seen
Swinging in a palanquin;—
Where among the desert sands
Some deserted city stands,
And its children, sweep and prince,
Grown to manhood ages since
Not a foot in street or house,
Not a stir of child or mouse,
And when kindly falls the night,
In all the town no spark of light.
There I'll come when I'm a man
With a camel caravan;
Light a fire in the gloom
Of some dusty dining room;
See the pictures on the walls,
Heroes, fights and festivals;
And in a corner find the toys
Of the old Egyptian boys.

—Robert Louis Stevenson.

Plea of the Lonesome Cat

I am a cat without a home,
And through the streets forlorn I roam.
I pick up food where'er I can,
From garbage pail to old tin can.
I used to have a cozy bed
In a nice box out in the shed.
But now 'most any place will do
For me to hide, and mew and mew.
Although in winter I'm a pet,
The ones who own me now forget,
While taking their vacation, that
They leave behind a lonesome cat
To roam the streets just like a tramp,
And to be treated as a scamp.

My fur which once was soft as silk,
When I was fed on nice sweet milk,
Is rough and coarse and matted, too,—
For, pray, what can a poor cat do,
Half starved, ill-treated, homeless, left
No other way except by theft
To get his living,—no place where
He may retire to dress his hair
In safety? Everybody knows
A cat who has a home, I 'spose.
But cats like me, brought up to know
Home comforts, then turned loose to go
Prowling around the summer through,—
My friends, does it occur to you
That when you your vacation take,
Our honor and our health's at stake,
Unless you find for us a place
Where we may live without disgrace,
'Till, back from mountain and seashore,
You make for us a home once more?

—Our Dumb Animals.

Bob White

My own home is in the big city,
But Uncle Dick has a farm,
And we all went down there last summer,
When the weather grew so warm.

One day (I was out in the orchard,
Up in an old apple tree)
I found a robin's little brown nest,
Built as snug as it could be.

And I took one of the little eggs—
There wasn't a soul in sight;
When somewhere, 'way off in the meadow,
I heard a bird call "Bob White!"

I wonder how he could know my name,
For I don't live on the farm;
And how did he know I had that egg,
So pretty and blue and warm?

For he just kept calling and calling
My name—"Bob White, Bob White!"
Then (I knew he meant that egg I took)
He said, "That's not right, not right!"

Then I thought of the eggs in the nest,
You know there were only three—
And maybe the mother bird loves them
As much as mother loves me.

So I climbed back into the old tree
Just as gently as I could,
And put my egg back into the nest—
I knew that I really should.

And that night, just as I went to bed,
When it was growing dark,
I thought that I heard that same bird call,
So I kept quite still to hark.

And I really and truly heard him;
He said, "It's all right, all right,"
And when I leaned out of the window,
I'm sure that he called "Good-night."

—Elizabeth W. Dennison.

Why My Family Go to the Circus

Friday, when the circus comes,
With its chariots and drums,
Then we'll see the tall giraffe,
And the clown who makes us laugh,
For you know he always can,
He is such a funny man.
Then we'll see the great parade,
Then we'll buy some lemonade,
And the kind they always drink
Is so beautifully pink,
I should really like to know
How and why they make it so.

Father says he used to go
To the circus years ago;
Doesn't care about it now,
Only goes to save a row.
Nothing there he wants to see,
Goes because it pleases me.
Mother, she dislikes it too;
Only goes because I do.
Uncle John will go with us
(Seems to me it's curious);
Says he's going for my sake;
Sure he cannot keep awake.
Aunt Jane says she'll come along,
Though perhaps it may be wrong;
But she thinks I ought to see
Things in natural history.

Nutting

Come, Robert and Harry, come, Lily and
May!
October is here, and our glad holiday.
With every breath of the keen, frosty
breeze,
Brown chestnuts are dropping from all
the high trees.

Come here with your bags and your big
baskets, quick,
And Harry's new jackknife shall cut a
long stick.
Then Robert shall climb the old chestnut-
tree tall,
And thrash the big boughs till the ripe
chestnuts fall.

So shiny and smooth, and so plump and
so brown,
The handsomest chestnuts that ever fell
down;
Though stately and proud the old nut
tree has stood
A hundred long years—the king of the
wood.

You dear little squirrel, you look very
wise,
With long bushy tail and bright, shiny,
black eyes.
Pray, sir, do you fancy you own the big
tree?
It's quite a mistake, sir, between you
and me.

We don't mean to rob you, dear, not in
the least,
But we too like chestnuts, and long for
a feast;
We know you must gather your snug
winter store,
But after we go you will find plenty
more.

The Captain of the Nine

We boys have got a baseball club.
We have the greatest fun!
You ought to see us pitch the ball,
And catch it, too, and run.
And when we hit it, how we cheer!
I guess you'd think 'twas fine!
We play in my back yard, so I
Am captain of the nine.

There's Charlie, he's the pitcher, 'cause
He's got a brother Ray,
Who plays at college on the team
(And once I saw him play.)
One day he said, "Hello!" to me,
Just like a friend of mine.

I wonder if he knew that I
Was captain of our nine?

And John has got a catcher's mask
To cover up his face,
So he's the catcher of our team.
And Willie plays first base.
(He has a truly baseball glove,
And takes them "on the line,")
And Dick plays in the field with me—
The captain of the nine.

You see, there's really only five,
Although perhaps some day
We may elect some other boys
And show them how to play.
But now we only just play "scrub"
In that back yard of mine.
But when we have a truly team
I'm captain of the nine.

—*Youth's Companion.*

Little Rain-Drops

Oh, where do you come from,
You little drops of rain,
Pitter-patter, pitter-patter,
Down the window-pane?
They say I'm very naughty,
But I've nothing else to do,
But sit here at the window;
I should like to play with you.

Tell me, little rain-drops,
Is that the way you play,
Pitter-patter, pitter-patter,
All the rainy day?
The little rain-drops cannot speak,
But "pitter-patter, pat"
Means, "We can play on this side:
Why can't you play on that?"

—*Selected.*

Jack in the Pulpit

Jack in the pulpit
Preaches today
Under the green trees
Just over the way.
Squirrel and song-sparrow
High on their perch
Hear the sweet lily-bells
Ringing to church.
Come, hear what his reverence
Rises to say,
In his low, painted pulpit
This calm Sabbath day.
Fair is the canopy
Over him seen,
Penciled by Nature's hand,
Black, brown and green.
Green is his surplice,
Green are his bands;
In his queer little pulpit
The little priest stands.
In black and gold velvet,
So gorgeous to see,
Comes with his bass voice
The chorister bee.
Green fingers playing
Unseen on wind-lyres—
Low singing bird voices—
These are his choirs.
The violets are deacons—
I know by the sign
That the cups which they carry
Are purple with wine;
And the columbines bravely
As sentinels stand
On the lookout with all their
Red trumpets in hand.
Meek-faced anemones,
Drooping and sad;
Great yellow violets,
Smiling out glad;
Buttercups' faces,
Beaming and bright;
Clovers, with bonnets—
Some red and some white;
Daisies, their white fingers
Half claspéd in prayer;
Dandelions, proud of
The gold of their hair;
Innocents,—children,
Guileless and frail,
Meek little faces
Upturned and pale;
Wildwood geraniums,
All in their best,
Languidly leaning,
In purple gauze dressed;—
All are assembled
This sweet Sabbath day,
To hear what the priest
In his pulpit will say.
Look! white Indian pipes
On the green mosses lie!
Who has been smoking
Profanely so nigh?
Rebuked by the preacher,
The mischief is stopped;
But the sinners, in haste,
Have their little pipes dropped.
Let the wind, with the fragrance
Of fern and black birch,
Blow the smell of the smoking
Clean out of the church.
So much for the preacher;
The sermon comes next.
Shall we tell how he preached it
And what was his text?
Alas! like too many
Grown-up folks who play
At worship in churches

Children should form at an early age the habit of committing to memory selections from the best literature. These selections should not be too long. If the poem is long, only that part should be memorized which contains the illuminating point of the selection, "a noble thought, nobly expressed." This should be a truth that applies to every class and condition of men, and so finds an interpreter in high and low alike; with respect to its importance it may be called the soul of the poem. Since life is many-sided the memory selections should be chosen to meet the needs of the many-sided child, and should set forth noble ideals of manhood and womanhood.

Man-builded today,
We heard not the preacher
Expound or discuss;
But we looked at the people,
And they looked at us.
We saw all their dresses,
Their colors and shapes,
The trim of their bonnets,
The cut of their capes.
We heard the wind-organ,
The bee and the bird,
But of Jack in the Pulpit
We heard not a word.

—*C. Smith.*

The Raccoon

Come, child, and see our pet raccoon,—
The raccoons live in the woods, you know,
But ours was caught
And caged, and brought
From old Virginia, long ago.

Oh, no, you need not be afraid;
See, he is fastened with a chain;
For ropes enough
He has gnawed off,
And he is hard to catch again.

He e'en will climb this ten-foot fence,
And, careless where his feet may strike,
He tumbles, bang!
And there will hang,
His rope being caught by vine or spike.

So now he's chained; yet up he'll climb
The stake to which he's fastened tight,
And mutter low,
So pleading, Oh!
'Twould make you sorry for him, quite.

Just see his nose, so pointed, sharp,
His ears as keen as keen can be,—
His eyes so bright,
So full of light,
And see him leap right merrily!

His fur, you see, is yellowish gray,—
And he is nearly two feet long;
He lives on roots,
And nuts and fruits,
When he's his native woods among.

But here we give him bread and milk;
He never eats like dogs or lambs,
But takes it up
From out the cup
With his fore feet, as we use hands.

You'd laugh to see him, I am sure;
Of strawberries, too, he's very fond;
Will poke around
Till he has found
Each one among the hulls out-thrown.

—*Mother Truth's Melodies.*

What the Winds Bring

"Which is the wind that brings the cold?"
"The north wind, Freddy; and all the snow,
And the sheep will scamper into the fold
When the north begins to blow."

"Which is the wind that brings the heat?"
"The south wind, Katy; and corn will grow,
And peaches redden for you to eat,
When the south begins to blow."

"Which is the wind that brings the rain?"
"The east wind, Arty; and farmers know
That cows come shivering up the lane,
When the east begins to blow."

"See our pet raccoon"

"Which is the wind that brings the flowers?"
"The west wind, Bessy; and soft and low
The birdies sing in the summer hours,
When the west begins to blow."

—*E. C. Stedman.*

Miss Willow

A lady so fine came out of the woods,
All dressed in silvery gray,
Whether satin or velvet, or soft woolen goods,
I'm sure I'm not able to say.

While great drifts were piled in hedgerow and plain,
While fiercely the March winds did blow,
And wildly the tempest in mockery raged,
This lady stepped out in the snow.

I asked a young ash which grew by the wall,
To tell me the fine lady's name;
"Oh yes," he made answer, "no trouble at all;
She has a most enviable fame.

"So modest is she, so dainty and sweet,
Most dearly I love her, 'tis true,
But if no objection the young lady brings
I'll make her acquainted with you.

"Miss Willow, my friend, Mr. Love-Nature here,
Your friendship has gallantly sought."
Then, in a low whisper, he laughingly said,
"We call her Miss Pussy for short."

A Spring Song

Old Mother Earth woke up from her sleep,
And found she was cold and bare;
The winter was over, the spring was near,
And she had not a dress to wear.
"Alas!" she sighed, with great dismay,
"Oh, where shall I get my clothes?
There's not a place to buy a suit,
And a dressmaker no one knows."

"I'll make you a dress," said the springing grass,
Just looking above the ground,
"A dress of green of the loveliest sheen,
To cover you all around."
"And we," said the dandelions gay,
"Will dot it with yellow bright."
"I'll make it a fringe," said forget-me-not,
"Of blue, very soft and light."

"We'll embroider the front," said the violets,
"With a lovely purple hue."
"And we," said the roses, "will make you a crown
Of red, jeweled over with dew."
"And we'll be your gems," said a voice from the shade,
Where the ladies' ear-drops live—
"Orange is the color for any queen
And the best we have to give."

Old Mother Earth was thankful and glad,
As she put on her dress so gay;
And that is the reason, my little ones,
She is looking so lovely today.

Dance of the Months

The New Year comes in with shout and laughter,
And see, twelve months are following after!
First January all in white,
And February short and bright;
See breezy March go tearing round;
But tearful April makes no sound.
May brings a pole with flowers crowned,
And June strews roses on the ground.
A pop! A bang! July comes in;
Says August, "What a dreadful din!"
September brings her golden sheaves;
October waves her pretty leaves,
While pale November waits to see
December bring the Christmas tree.
They join their hands to make a ring,
And as they dance they merrily sing,
"Twelve months we are, you see us here,
We make the circle of the year.
We dance and sing, and children dear,
We wish you all a glad New Year."

—*Selected.*

Two and One

Two ears and only one mouth have you;
The reason, I think, is clear;
It teaches, my child, that it will not do
To talk about all you hear.

Two eyes and only one mouth have you;
The reason of this must be
That you should learn that it will not do
To talk about all you see.

Two hands and only one mouth have you;
And it is worth while repeating,
The two are for work that you must do,
The one is enough for eating.

—*Selected.*

The Body

From the top of my head to my tiny toes,
I am built of bones, as every one knows.

These are the framework so strong within;
Outside they are covered with flesh and skin.

The parts of my body are only three,
My head, my trunk, and my limbs, as you see.

And just in front, in the foremost place,
You plainly can see my neat little face.

My face has a forehead, nose, mouth, and chin,
Two cheeks where the dimples slip out and in.

Two eyes to see you when you are near,
Two ears like seashells, to help me to hear.

My neck and shoulders so broad and strong,
Arm, forearm, wrist, hand, and fingers so long.

My trunk, and my thighs, legs, ankles, and knees,
On two feet I stand, or run, if I please.

My joints are to bend, when I run, jump, or walk;
I've a little red tongue to help me to talk.

These make up my body, and now I will tell
What we all must do to keep strong and well.

To be neat and clean we must take great care,
Have plenty of sunshine and breathe the fresh air.

Eat nourishing food to make good blood; and then
We shall all become strong women and men.

—*Selected.*

The First Snow

The north wind doth blow, and we shall have snow,
And what will poor robin do then, poor thing?
He'll sit in the barn and keep himself warm,
And hide his head under his wing, poor thing.

The north wind doth blow, and we shall have snow,
And what will the honey bee do, poor thing?
In his hive he will stay till the cold's passed away,
And then he'll come out in the spring, poor thing.

The north wind doth blow, and we shall have snow,
And what will the dormouse do then, poor thing?
Rolled up like a ball in his nest, snug and small,
He'll sleep till warm weather comes back, poor thing.

The north wind doth blow, and we shall have snow,
And what will the children do then, poor things?
When lessons are done they'll jump, skip, and run,
And that's how they'll keep themselves warm, poor things.

—*Selected.*

A Good Play

We built a ship upon the stairs
All made of the back-bedroom chairs,
And filled it full of sofa pillows
To go a-sailing on the billows.

We took a saw and several nails,
And water in the nursery pails;
And Tom said," Let us also take
An apple and a slice of cake;"—
Which was enough for Tom and me
To go a-sailing on, till tea.

We sailed along for days and days,
And had the very best of plays;
But Tom fell out and hurt his knee,
So there was no one left but me.

—*Robert Louis Stevenson.*

Twinkle, Twinkle, Little Star

Twinkle, twinkle, little star;
How I wonder what you are!
Up above the world so high,
Like a diamond in the sky.

When the blazing sun is gone,
When he nothing shines upon,
Then you show your little light,
Twinkle, twinkle, all the night.

In the dark blue sky you keep,
And often through my curtains peep:
For you never shut your eye
Till the sun is in the sky.

And your bright and tiny spark
Lights the traveler in the dark.
Though I know not what you are,
Twinkle, twinkle, little star.

—*Jane Taylor.*

Lily's Ball

Lily gave a party,
And her little playmates all,
Gayly dressed, came in their best,
To dance at Lily's ball.

Little Quaker Primrose
Sat and never stirred,
And, except in whispers,
Never spoke a word.

Snowdrop nearly fainted
Because the room was hot,
And went away before the rest
With sweet Forget-me-not.

Pansy danced with Daffodil,
Rose with Violet;
Silly Daisy fell in love
With pretty Mignonette.

But when they danced the country-dance,
One could scarcely tell
Which of these two danced it best—
Cowslip or Heatherbell.

Between the dances, when they all
Were seated in their places,
I thought I'd never seen before
So many pretty faces.

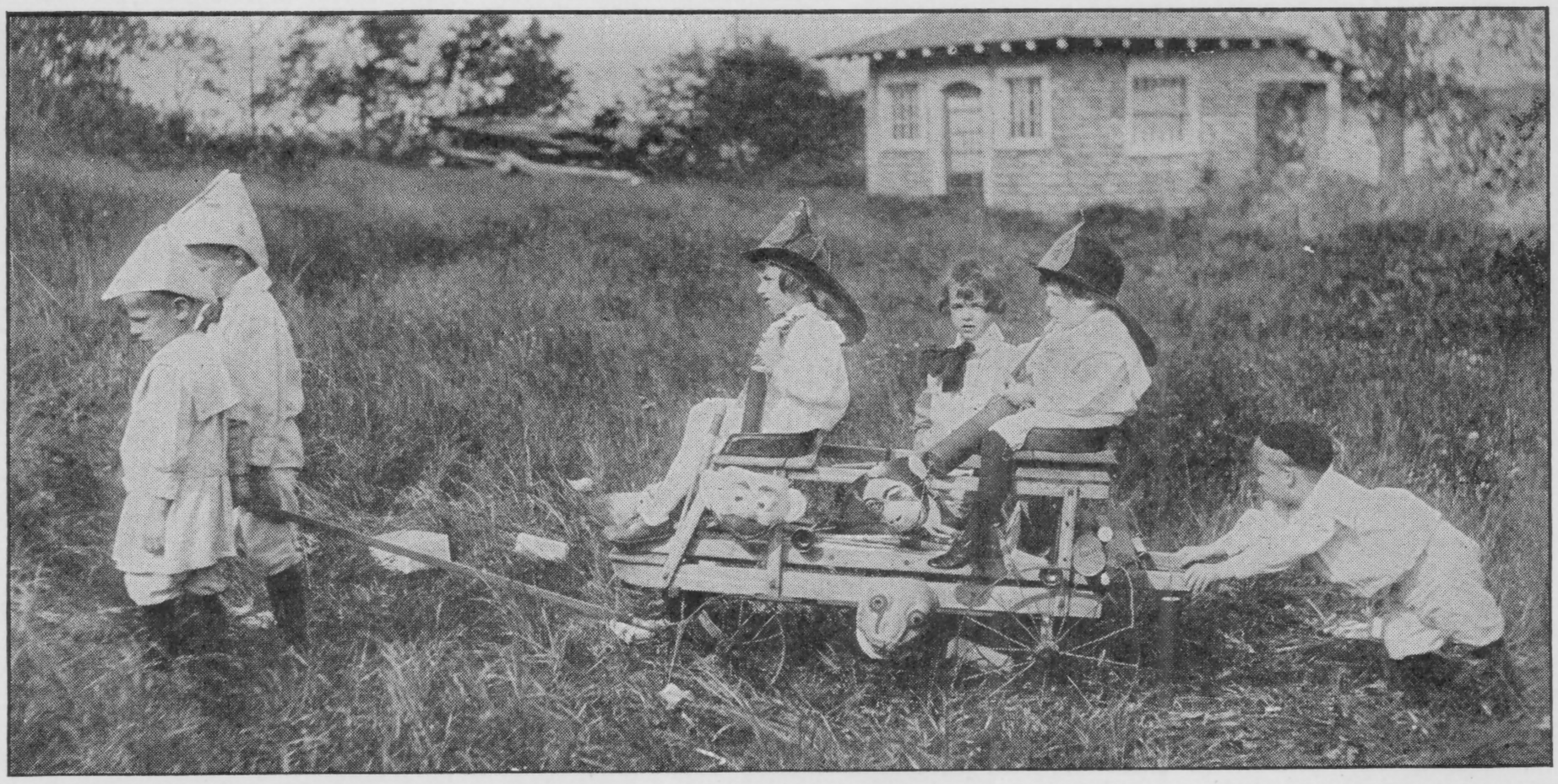
But of all the pretty maidens
I saw at Lily's ball,
Darling Lily was to me
The sweetest of them all.

And when the dance was over,
They went downstairs to sup;
Each had a taste of honey-cake,
With dew in a buttercup.

And all were dressed to go away
Before the set of sun;
And Lily said "Good-bye," and gave
A kiss to every one.

Before the moon or a single star
Was shining overhead,
Lily and all her little friends
Were fast asleep in bed.

—*Fun and Earnest.*



"What is this racket all about?"

Why?

The guns were banging in the street,
  The drums were beating loud,
The crackers snapped, the cannon boomed,
  Hurrahed the merry crowd.

"What's this," cried grandpa, looking glum,
  (Of course, 'twas all in fun),
"Has Fourth o' July got round again?
  There goes another gun!"

He put his glasses on to look,
  He held his ears to hear;
"What is this racket all about?
  Just hear those youngsters cheer!"

The children laughed in merry glee;
  "This is—now don't you know?
The day that Washington was born,
  So many years ago."

"And, why," asked grandpa, puzzled still,
  Though he is seventy-nine,
"Should you his birthday celebrate
  With better cheer than mine?"

Then up spoke honest little Ted:
  "Grandpa, I'll tell you why,
Because—*because in all his life*
  He never told a lie!"

Who Stole the Bird's Nest?

"To-whit, to-whit, to-whee!
Will you listen to me?
Who stole four eggs I laid,
And the nice nest I made?"

"Not I," said the cow; "moo-oo!
Such a thing I'd never do.
I gave you a wisp of hay,
But didn't take your nest away.
Not I," said the cow; "moo-oo!
Such a thing I'd never do!"

"Bob-o'-link! bob-o'-link!
Now, what do you think?
Who stole a nest away
From the plum-tree today?"

"Not I," said the dog; "bow-wow!
I wouldn't be so mean anyhow.
I gave hairs the nest to make,
But the nest I did not take.
Not I," said the dog; "bow-wow!
I wouldn't be so mean anyhow!"

"Coo-coo, coo-coo, coo-coo!
Let me speak a word or two:
Who stole that pretty nest
From little yellow breast?"

"Not I," said the sheep; "oh, no!
I wouldn't treat a poor bird so.
I gave wool the nest to line,
But the nest was none of mine.
Baa, baa!" said the sheep; "oh, no!
I wouldn't treat a poor bird so!"

"Caw, caw!" cried the crow;
"I should like to know
What thief took away
A bird's nest today?"

"Cluck, cluck!" said the hen;
"Don't ask me again;
Why, I haven't a chick
Would do such a trick!
We each gave her a feather
And she wove them together.
I'd scorn to intrude
On her and her brood.
Cluck, cluck!" said the hen;
"Don't ask me again."

"Chir-a-whir! chir-a-whir!
We'll make a great stir,
And find out his name,
And all cry, 'For shame!'"

"I would not rob a bird,"
  Said little Mary Green;
"I think I never heard
  Of anything so mean."

"It is very cruel too,"
  Said little Alice Neal;
"I wonder if he knew
  How sad the bird would feel!"

A little boy hung down his head,
And went and hid behind the bed;
For he stole that pretty nest,
From poor little yellow breast;
And he felt so full of shame,
He didn't like to tell his name.

—*L. Maria Child.*

Playing Robinson Crusoe

From "The Just So Stories"

Pussy can sit by the fire and sing,
  Pussy can climb a tree,
Or play with a silly old cork and string
  To 'muse herself, not me.
But I like Binkie, my dog, because
  He knows how to behave;
So, Binkie's the same as the First Friend was,
  And I am the Man in the Cave.

Pussy will play Man-Friday till
  It's time to wet her paw
And make her walk on the window-sill
  (For the footprint Crusoe saw);
Then she fluffles her tail and mews,
  And scratches and won't attend,
But Binkie will play whatever I choose,
  And he is my true First Friend.

Pussy will rub my knees with her head,
  Pretending she loves me hard;
But the very minute I go to my bed
  Pussy runs out in the yard,
And there she stays till the morning-light;
  So I know it is only pretend;
But Binkie, he snores at my feet all night,
  And he is my Firstest Friend!

—*Rudyard Kipling.*

The Swing

How do you like to go up in a swing,
  Up in the air so blue?
Oh, I do think it the pleasantest thing
  Ever a child can do!

Up in the air and over the wall,
  Till I can see so wide,
Rivers and trees and cattle and all
  Over the countryside—

Till I look down on the garden green,
  Down on the roof so brown—
Up in the air I go flying again,
  Up in the air and down!

—*Robert Louis Stevenson.*

Halloween

On Halloween the goblins dance,
The witches on their broomsticks prance,
The boys and girls their mad pranks play,
And all are happy, blithe and gay.
—*Monira F. McIntosh.*

How the Leaves Came Down

"I'll tell you how the leaves came down."
The great tree to his children said,
"You're getting sleepy, Yellow and Brown,
Yes, very sleepy, little Red.
It is quite time to go to bed."

"Ah!" begged each silly, pouting leaf,
"Let us a little longer stay;
Dear Father Tree, behold our grief;
'Tis such a very pleasant day
We do not want to go away."

So, for just one more merry day
To the great tree the leaflets clung,
Frolicked and danced, and had their way,
Upon the autumn breezes swung,
Whispering all their sports among,—

"Perhaps the great tree will forget,
And let us stay until the spring,
If we all beg, and coax, and fret."
But the great tree did no such thing;
He smiled to hear their whispering.

"Come, children, all to bed," he cried;
And ere the leaves could urge their prayer,
He shook his head, and far and wide,
Fluttering and rustling everywhere,
Down sped the leaflets through the air.

I saw them; on the ground they lay,
Golden and red, a huddled swarm,
Waiting till one from far away,
White bedclothes heaped upon her arm,
Should come to wrap them safe and warm.

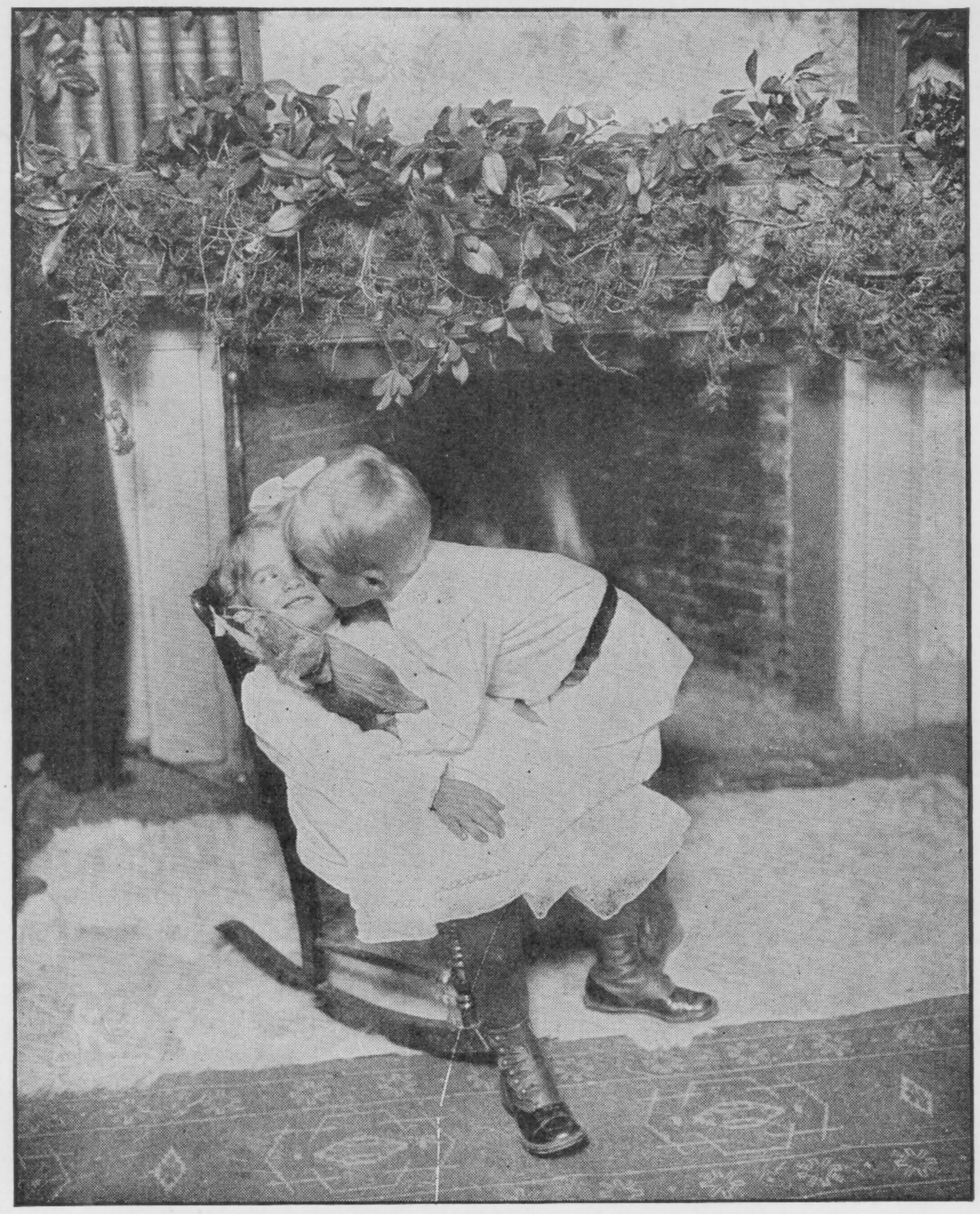
The great bare tree looked down and smiled,
"Good-night, dear little leaves," he said.
And from below each sleepy child
Replied, "Good-night," and murmurèd,
"It is so nice to go to bed!"
—*Susan Coolidge.*

Thanksgiving Day

Over the river and through the wood,
To grandfather's house we'll go;
The horse knows the way
To carry the sleigh
Through the white and drifted snow.

Over the river and through the wood,—
Oh, how the wind does blow!
It stings the toes,
And bites the nose
As over the ground we go.

Over the river and through the wood,
To have a first-rate play,
Hear the bells ring
"Ting-a-ling-ding!"
Hurrah for Thanksgiving Day!



"The boys and girls their mad pranks play"

Over the river and through the wood,
Trot fast, my dapple gray!
Spring over the ground
Like a hunting hound!
For this is Thanksgiving Day.

Over the river and through the wood,
And straight through the barn-yard gate;
We seem to go
Extremely slow;
It is so hard to wait!

Over the river and through the wood,
Now grandmother's cap I spy!
Hurrah for the fun!
Is the pudding done?
Hurrah for the pumpkin pie!
—*Lydia Maria Child.*

The Land of Story-Books

At evening when the lamp is lit,
Around the fire my parents sit;
They sit at home and talk and sing,
And do not play at anything.

Now, with my little gun, I crawl
All in the dark along the wall,
And follow round the forest track
Away behind the sofa back.

There, in the night, where none can spy,
All in my hunter's camp I lie,
And play at books that I have read
Till it is time to go to bed.

These are the hills, these are the woods,
These are my starry solitudes;
And there the river by whose brink
The roaring lions come to drink.

I see the others far away.
As if in firelit camp they lay,
And I, like to an Indian scout,
Around their party prowled about.

So, when my nurse comes in for me,
Home I return across the sea,
And go to bed with backward looks
At my dear land of Story-books.
—*Robert Louis Stevenson.*

Maude and the Cricket

"Good-night, dear Maudie," I softly said,
And tucked her in her little bed.
"Good-night, mamma," she said to me,
"I am just as sleepy as I can be."

But scarcely closed was the chamber door,
When her eager voice called out once more:
"Mamma," she said, "what is it I hear—
That strange little noise, so sharp and queer?"

I listened,—then told her all was still,
Save a merry cricket piping shrill;
"He is hidden in the closet here,
To sing you to sleep, my Maudie dear."

Then Maudie sat up in her night-dress white,
And her eyes grew big and round and bright.
"Now, dear mamma, please move my bed
Close up to the closet door," she said.

"Poor little fellow! He wants to speak.
And all he can say is 'Creak, creak, creak!'
I wish to tell him I hear his song,
And ask him to sing it all night long."

"I'll leave the door open," I said, "part way,
So the cricket can hear whatever you say;
Now, while I go to your baby brother,
You little crickets may sing to each other."

When soon again I crept up the stair,
And stood for a moment listening there,
Over the household was silence deep—
Maud and the cricket were both asleep.

When "sleepy time" came for Maude next night,
She rushed around like a fairy white;
Peeped into the closet and over the floor,
To find the little cricket once more.

He was not to be seen in any place,
So Maude lay down with a mournful face;
When under her crib a voice piped clear—
"Creak, creakety, creak! I'm here, I'm here!"

Then Maudie screamed with surprised delight;
And she always believed from that very night,
That crickets can hear when little girls speak,
And mean a great deal by their "Creak, creak, creak!"

—*Selected.*

Who Likes the Rain?

"I," said the duck, "I call it fun,
For I have my little red rubbers on;
They make a cunning three-toed track
In the soft, cool mud. Quack! Quack! Quack!"

"I," cried the dandelion, "I,
My roots are thirsty, my buds are dry;"
And she lifted a towsled yellow head
Out of her green and grassy bed.

"I hope 'twill pour! I hope 'twill pour!"
Purred the tree-toad at his gray back door,
"For, with a broad leaf for a roof,
I am perfectly weather proof."

Sang the brook: "I laugh at every drop,
And wish they never need to stop
Till a big, big river I grew to be,
And could find my way out to the sea."

"I," shouted Ted, "for I can run,
With my high-top boots and my rain-coat on,
Through every puddle and runlet and pool
That I find on my way to school."

—*Clara Doty Bates.*

Autumn Leaves

"Come, little leaves," said the wind one day,
"Come over the meadows with me, and play;
Put on your dresses of red and gold;
Summer is gone, and the days grow cold."

Soon as the leaves heard the wind's loud call,
Down they came fluttering, one and all;
Over the brown fields they danced and flew,
Singing the soft little songs they knew.

"Cricket, good-bye, we've been friends so long;
Little brook, sing us your farewell song—
Say you're sorry to see us go;
Ah! you are sorry, right well we know.

"Dear little lambs, in your fleecy fold,
Mother will keep you from harm and cold;
Fondly we've watched you in vale and glade;
Say, will you dream of our loving shade?"

Dancing and whirling the little leaves went;
Winter had called them and they were content—
Soon fast asleep in their earthy beds,
The snow laid a soft mantle over their heads.

—*George Cooper.*

October's Party

October gave a party;
The leaves by hundreds came,
The Chestnuts, Oaks, and Maples,
And leaves of every name.

The sunshine spread a carpet,
And everything was grand;
Miss Weather led the dancing,
Professor Wind the band.

The Chestnuts came in yellow,
The Oaks in crimson dressed,
The lovely Misses Maple
In scarlet looked their best.

All balanced to their partners
And gaily fluttered by;
The sight was like a rainbow
New fallen from the sky.

Then in the rustic hollow
At hide-and-seek they played;
The party closed at sundown
And everybody stayed.

Profesor Wind played louder;
They flew along the ground,
And then the party ended
In hands across, all round.

—*Song Stories for Little Folk.*

The New Moon

Dear mother, how pretty
The moon looks tonight!
She was never so cunning before;
Her two little horns
Are so sharp and bright,
I hope she'll not grow any more
If I were up there,
With you and my friends,
I'd rock in it nicely, you'd see;
I'd sit in the middle
And hold by both ends;
Oh, what a bright cradle 'twould be!

I would call to the stars
To keep out of the way,
Lest we should rock over their toes;
And then I would rock
Till the dawn of the day,
And see where the pretty moon goes.

And there we would stay
In the beautiful skies;
And through the bright clouds we would roam.
We would see the sun set,
And see the sun rise,
And on the next rainbow come home.

—*Mrs. Follen.*

My Shadow

I have a little shadow that goes in and out with me,
And what can be the use of him is more than I can see.
He is very, very like me from the heels up to the head;
And I see him jump before me, when I jump into my bed.
The funniest thing about him is the way he likes to grow—
Not at all like proper children, which is always very slow;
For he sometimes shoots up taller like an India-rubber ball,
And he sometimes gets so little that there's none of him at all.

He hasn't got a notion of how children ought to play,
And can only make a fool of me in every sort of way.
He stays so close beside me, he's a coward, you can see;
I'd think shame to stick to nursie as that shadow sticks to me!

One morning, very early, before the sun was up,
I rose and found the shining dew on every buttercup;
But my lazy little shadow, like an arrant sleepy-head,
Had stayed at home behind me and was fast asleep in bed.

—*Robert Louis Stevenson.*

System

Every night my prayers I say,
And get my dinner every day;
And every day that I've been good,
I get an orange after food.

The child that is not clean and neat,
With lots of toys and things to eat,
He is a naughty child, I'm sure—
Or else his dear papa is poor.

—*Robert Louis Stevenson.*

My Little Farm

When a little farm I keep,
I shall tend my cows and sheep,
And my pretty lambs shall fold
In deep pastures starred with gold.

On green carpets they shall tread,
Gold and purple be their bed,
Honeyed clover make their food
In a watered solitude.

And my garden places shall
Grow me fruits on tree and wall,
Give me blossoms in the spring
And an autumn gathering.

Hives of honey I shall own,
Bees with drowsy monotone
Toil all day to bring me home
Heather honey at the gloam.

'Twixt the mountains and the sea
There my little farm will be,—
I shall tend my sheep and kine,
And a thankful heart be mine.

—*Katherine Tynan.*

A Wonderful Weaver

There's a wonderful weaver
High up in the air,
And he weaves a white mantle
For cold earth to wear.
With the wind for his shuttle,
The cloud for his loom
How he weaves, how he weaves,
In the light, in the gloom.

Oh, with finest of laces
He decks bush and tree;
On the bare, flinty meadows,
A cover lays he.
Then a quaint cap he places
On pillar and post,
And he changes the pump
To a grim, silent ghost.

But this wonderful weaver
Grows weary at last;
And the shuttle lies idle
That once flew so fast.
Then the sun peeps abroad
On the work that is done;
And he smiles: "I'll unravel
It all, just for fun."

—*George Cooper.*

The Meddlesome Child

Matilda was a pleasant child,
But one bad trick she had,
That e'en when all around her smiled,
Oft made her friends feel sad.

Sometimes she'd lift the teapot-lid,
To peep at what was in it;
Or tilt the kettle, if you did
But turn your head a minute.

As grandmamma went out one day,
Her snuff-box and her specs
She down upon the table lay,
Forgetting Tilly's tricks.

Immediately upon her nose
She placed the glasses wide,
Then looking round, as I suppose,
The snuff-box too she spied.

So thumb and finger went to work,
To move the stubborn lid;
And as she gave it quite a jerk,
Much mischief then she did.

The snuff came puffing in her face
And eyes and nose and chin,
And as she ran about for ease,
The snuff got further in.

She dashed the spectacles away,
To wipe her tingling eyes;
And there in twenty bits they lay,
As grandmamma she spies.

She then, while smarting with the pain,
Sneezing, and sick and sore,
Made many a promise to refrain
From meddling any more.

Baby's First Christmas

Hang up the baby's stocking,
Be sure you don't forget.
The dear little dimpled darling
Has never seen Christmas yet.

But I told him all about it,
And he opened his big blue eyes;
I am sure he understood it,
He looked so funny and wise.

Ah! what a little stocking!
It doesn't take much to hold
Such little pink toes as baby's
Safe from the frost and cold.

But then, for the baby's Christmas
It will never do at all;
For Santa Claus wouldn't be looking
For anything half so small.

I know what we'll do for baby;
I've thought of a very good plan.
I'll borrow a stocking of grandma,
The longest one, if I can.

And you may hang it up, mother,
Right in the corner—so;
And write a letter for baby,
And pin it on the toe.

"Dear Santa Claus,—This is a stocking
Hung up for our baby here.
You never have seen the darling;
He has not been with us a year.

"But he is a beautiful baby!
And now, before you go,
Please fill this stocking with playthings
From the top of it down to the toe."

The Bluebird

I know the song that the bluebird is singing,
Out in the apple tree where he is swinging;
Brave little fellow! the skies may be dreary!
Nothing cares he while his heart is so cheery.

Hark! how the music leaps out from his throat!
Hark! was there ever so merry a note?
Listen a while and you'll hear what he's saying,
Up in the apple tree swinging and swaying

"Dear little blossoms down under the snow,
You must be weary of winter, I know.
Hark! while I sing you a message of cheer!
Summer is coming! and springtime is here!

"Little white snowdrops! I pray you arise;
Bright yellow crocus! Come, open your eyes;
Sweet little violets, hid from the cold,
Put on your mantles of purple and gold;
Daffodils! daffodils! say, do you hear?
Summer is coming! springtime is here!"

—*Emily Huntington Miller.*

The Clouds

On the grass in the meadow a little boy lay,
With his face turned up to the sky,
And he watched the clouds as far away
They lazily floated by.

"I love you, clouds," the little boy said;
"You look so pretty and white;
And you keep the sun from my face and head
When he shines too fierce and bright.

"Sometimes you look like a flock of doves
Flying far, far away,
Or feathers plucked from their downy breasts,
Or little white lambs at play.

"Sometimes there are heaps of foam and snow,
And fishes, dogs, and sheep,
With bridges and other things that I know,
As over the heavens you sweep.

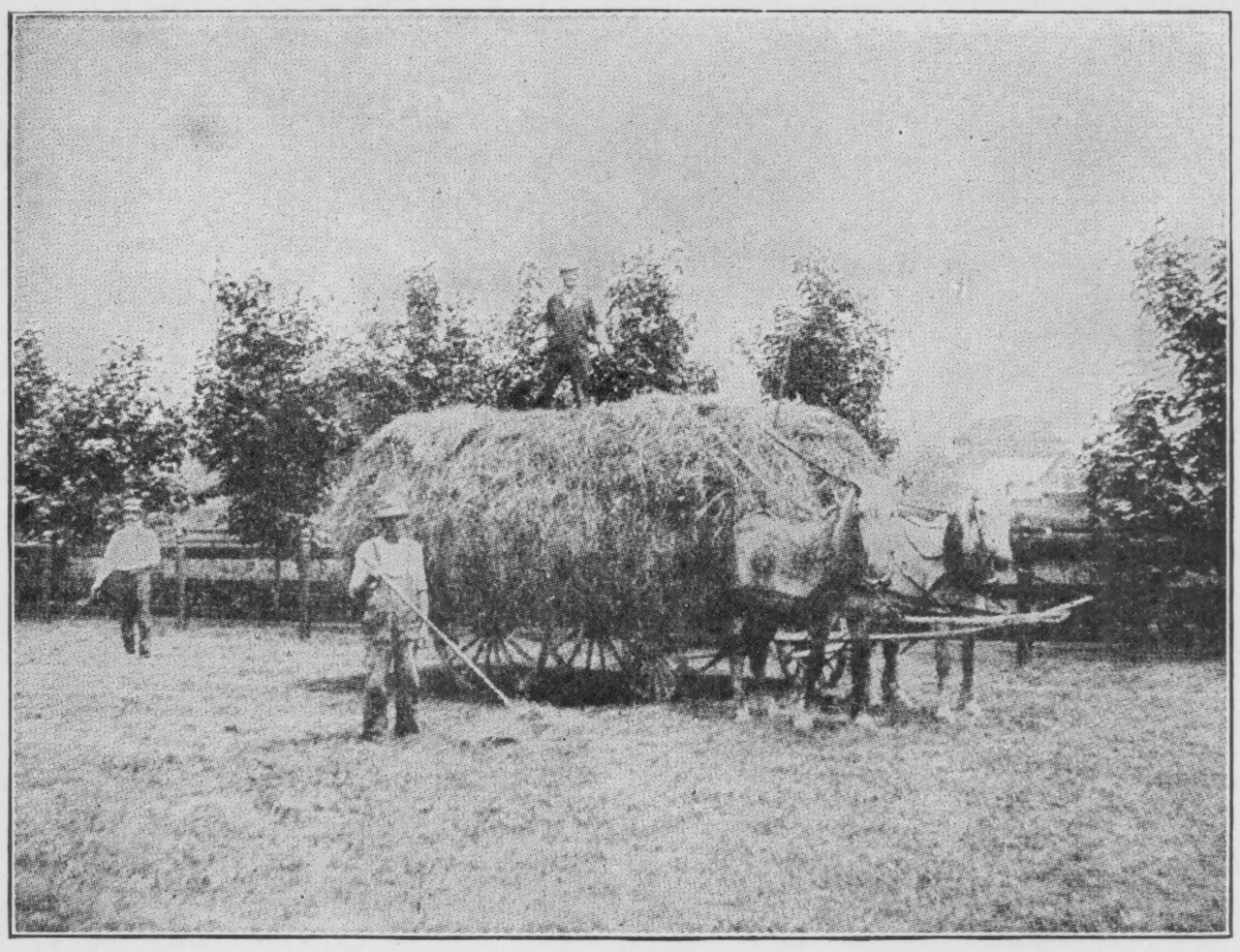
"Sometimes you look like the sails of a ship,
With the blue sky for the sea,
I am lonely, clouds, and I love you so!
Do come and play with me!"

The white clouds heard as they floated by,
And they thought they should like to go
And play awhile with the little boy
Who seemed to love them so.

So they gathered thickly over his head,
And before he looked again,
The little clouds came tumbling down
In a pelting shower of rain.

The thirsty buds and the drooping flowers
Were glad that the shower had come;
But the little boy jumped up and ran
As fast as he could for home.

Next day the little boy looked again,
And said as the clouds sailed by,
"I love you, clouds, but I love you best
When you stay away up in the sky."



"They led in wagons home"

The Hayloft

Through all the pleasant meadow-side
The grass grew shoulder-high,
Till the shining scythes went far and wide
And cut it down to dry.

These green and sweetly smelling crops
They led in wagons home;
And they piled them here in mountain tops
For mountaineers to roam.

Here is Mount Clear, Mount Rusty-Nail,
Mount Eagle and Mount High;—
The mice that in these mountains dwell
No happier are than I!

O what a joy to clamber there,
O what a place to play
With the sweet, the dim, the dusty air,
The happy hills of hay!

—*Robert Louis Stevenson.*

Where Go the Boats?

Dark brown is the river,
Golden in the sand,
It flows along forever,
With trees on either hand.

Green leaves a-floating,
Castles of the foam,
Boats of mine a-boating—
Where will all come home?

On goes the river
And out past the mill,
Away down the valley,
Away down the hill.

Away down the river,
A hundred miles or more,
Other little children
Shall bring my boats ashore.

—*Robert Louis Stevenson.*

The Seed

As wonderful things are hidden away
In the heart of a little brown seed,
As ever were found in the fairy net
Of which children sometimes read.

Over its pretty shining coat
We sprinkle the earth so brown,
And the sunshine warms its lowly bed,
And the rain comes dropping down.

Patter, patter, the soft, warm rain
Knocks at the tiny door,
And two little heads come peeping out,
Like a story in fairy lore.

One is the Caulicle creeping down,
At the first but a wee white root;
The other is Plumule; above the soil
It sends up a little green shoot.

Steadily up toils the slender stem,
And only its work it heeds;
A leaf appears, buds, blossoms, and fruit,
Last of all come the little seeds.

Then its work all done, if an annual,
It has had its brief, bright day,
And now at the touch of the Frost-king's breath
It withers and fades away.

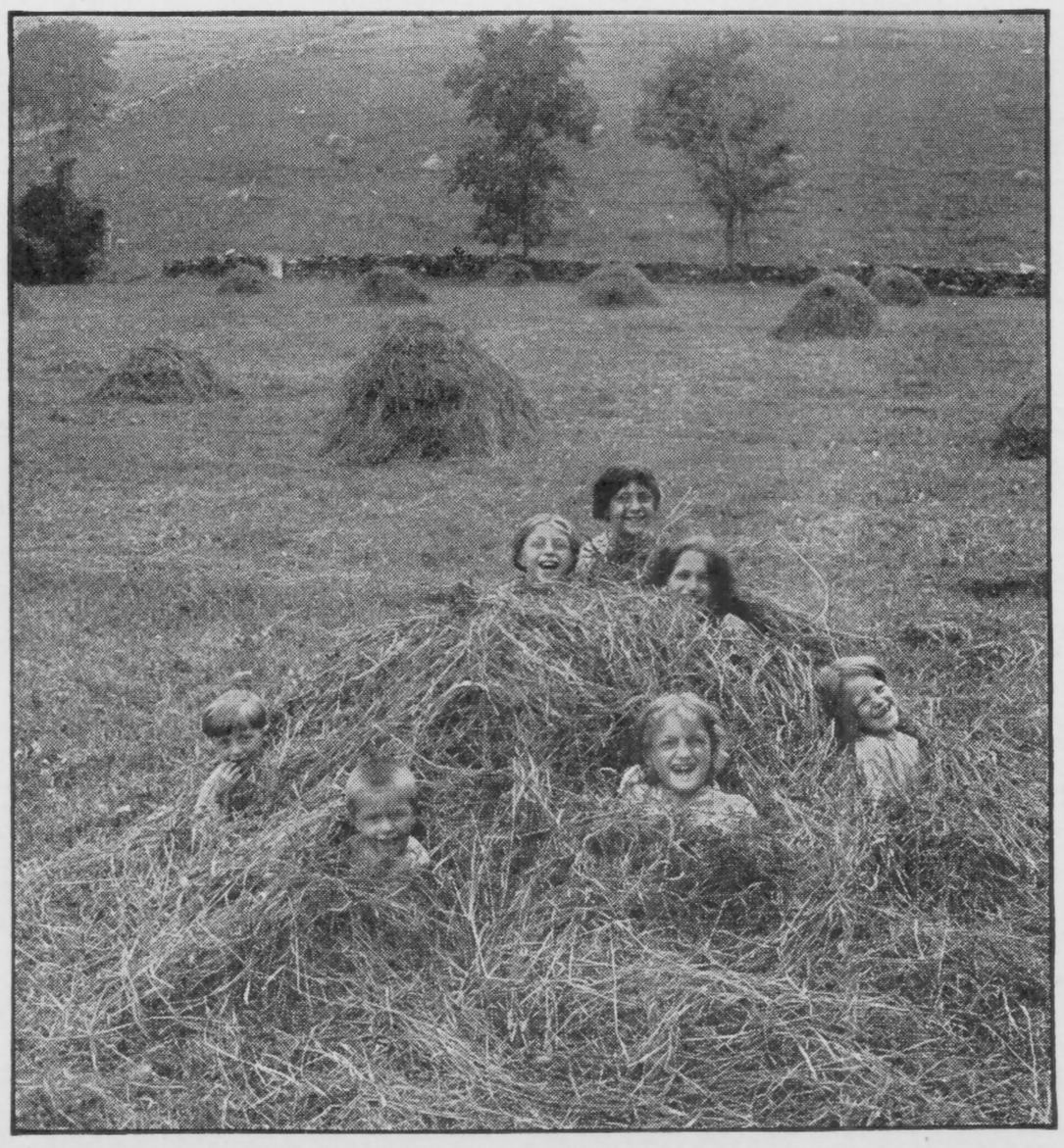
—*Selected.*

Dandelion

There's a dandy little fellow,
Who dresses all in yellow,
In yellow with an overcoat of green;
With his hair all crisp and curly,
In the springtime bright and early
A-tripping o'er the meadow he is seen.
Through all the bright June weather,
Like a jolly little tramp,
He wanders o'er the hillside, down the road;
Around his yellow feather
The gypsy fireflies camp;
His companions are the wood lark and the toad.

But at last this little fellow
Doffs his dainty coat of yellow,
And very feebly totters o'er the green;
For he very old is growing,
And with hair all white and flowing,
A-nodding in the sunlight he is seen.
Oh, poor dandy, once so spandy,
Golden dancer on the lea!
Older growing, white hair flowing,
Poor little baldhead dandy now is he!

—*Nellie M. Garabrant.*



"O what a place for play!"

Playing the Piano

I do not see why people take
So long to learn to play;
Why I can play the piano
I learned it in one day.

And oh, it's just so easy!
You just put out your hand
And press those little white keys down,—
And isn't the noise just grand?

Then keep your hands upon the keys,
And let them dance around,
It doesn't matter where they go,
You're sure to get the sound.

It does seem strange it takes some folks
So long to learn it all!
I learned the whole thing in a day,—
And I'm not very tall.

The Lost Doll

I once had a sweet little doll, dears,
The prettiest doll in the world;
Her cheeks were so red and white, dears,
And her hair was so charmingly curled.
But I lost my poor little doll, dears,
As I played in the heath one day;
And I cried for her more than a week, dears,
But I never could find where she lay.

I found my poor little doll, dears,
As I played in the heath one day;
Folks say she is terribly changed, dears,
For her paint is all washed away,
And her arms trodden off by the cows, dears,
And her hair not the least bit curled;
Yet for old sakes' sake, she is still, dears,
The prettiest doll in the world.

—*Charles Kingsley.*

A Child to a Rose

White Rose, talk to me!
I don't know what to do.
Why do you say no word to me,
Who say so much to you?
I'm bringing you a little rain,
And I shall be so proud
If, when you feel it on your face,
You take me for a cloud.
Here I come so softly,
You cannot hear me walking;
If I take you by surprise,
I may catch you talking.

Tell all your thoughts to me,
Whisper in my ear;
Talk against the winter,
He shall never hear.
I can keep a secret
Since I was five years old.
Tell if you were frightened
When first you felt the cold;
And, in the splendid summer,
While you flush and grow,
Are you ever out of heart
Thinking of the snow?

Did it feel like dying
When first your blossoms fell?
Did you know about the spring?
Did the daisies tell?
If you had no notion,
Only fear and doubt,
How I should have liked to see
When you found it out!
Such a beautiful surprise!
What must you have felt,
When your heart began to stir,
As the snow began to melt!

Do you mind the darkness
As I used to do?
You are not as old as I;
I can comfort you.
The little noises that you hear
Are winds that come and go.
The world is always kind and safe,
Whether you see or no.

And if you think that there are eyes
About you near and far,
Perhaps the fairies are watching,—
I know the angels are.

I think you must be lonely
When all the colors fail,
And moonlight makes the garden
So massy and so pale;
And anything might come at last
Out of those heaps of shade.
I would stay beside you
If I were not afraid!
Children have no right to go
Abroad in night and gloom;
But you are safe in the garden
As I am in my room.

White Rose, do you love me?
I only wish you'd say!
I would work hard to please you
If I but knew the way.
It seems so hard to be loving,
And not a sign to see
But the silence and the sweetness
For all as well as me.
I think you nearly perfect,
In spite of all your scorns;
But, White Rose, if I were you,
I wouldn't have those thorns!

Perseverance

King Bruce of Scotland flung himself down
In a lonely mood to think;
'Tis true he was monarch and wore a crown,
But his heart was beginning to sink.

For he had been trying to do a great deed
To make his people glad;
He had tried and tried, but could not succeed,
And so he became quite sad.

He flung himself down in low despair,
As grieved as man could be;
And after a while, as he pondered there,
"I'll give it up!" cried he.

Now, just at that moment a spider dropped
With its silken cobweb clew;
And the king in the midst of his thinking stopped
To see what the spider would do.

'Twas a long way up to the ceiling dome,
And it hung by a rope so fine,
That how it could get to its cobweb home,
King Bruce could not divine.

It soon began to cling and crawl
Straight up with strong endeavor;
But down it came with a slipping sprawl,
As near to the ground as ever.

Up, up, it ran, nor a second did stay
To make the least complaint,
Till it fell still lower; and there it lay
A little dizzy and faint.

Its head grew steady,—again it went,
And traveled a half yard higher;
'Twas a delicate thread it had to tread,
And a road where its feet would tire.

Again it fell, and swung below,
But up it quickly mounted;
Till up and down, now fast, now slow,
Nine brave attempts were counted.

"Sure," said the king, "that foolish thing
Will strive no more to climb,
When it toils so hard to reach and cling,
And tumbles every time!"

But up the insect went once more;
Ah, me! 'tis an anxious minute;
He's only a foot from his cobweb door—
Oh, say! will he lose, or win it?

"Bravo, bravo!" the king cried out,
"All honor to those who try!
The spider up there defied despair;
He conquered, and why should not I?"

And Bruce of Scotland braced his mind;
And gossips tell the tale,
That he tried once more, as he tried before,
And that time he did not fail.

Pay goodly heed, all you who read,
And beware of saying "I can't."
'Tis a cowardly word, and apt to lead
To idleness, folly, and want.

—*Eliza Cook.*

A Disastrous Ride

Some little drops of water,
Whose home was in the sea,
To go upon a journey
Once happened to agree.

A cloud they had for carriage;
They drove a playful breeze,
And over town and country
They rode along at ease.

But oh! there were so many,
At last the carriage broke,
And to the ground came tumbling
These frightened little folk;

And through the moss and grasses
They were compelled to roam,
Until a brooklet found them
And carried them all home.

The Hard-Work Plan

From the lowest depths of poverty
To the highest heights of fame,
From obscureness of position
To a bright and shining name;
From the mass of human beings,
Who compose the common clan,
You can earn your way to greatness
By the Hard-Work Plan.

'Twas the key to Lincoln's progress,
'Twas the route to Webster's fame;
And Garfield, by this method,
To distinction laid his claim;
And all earth's noblest heroes,
Since this old world first began,
Have earned their way to honor
By the Hard-Work Plan.

—*Success.*

The Easter Rabbit's Eggs

The eggs the Easter rabbit
Brought me, I do declare,
Are just the shape of hen's eggs.
All colored up for fair.

It really, truly puzzles me
When I look at them, and then,
I really quite decide that he
Was helped out by a hen.

—*A. R. Stanley.*

Seven Times One

There's no dew left on the daisies and clover,
There's no rain left in heaven;
I've said my "seven times" over and over:
Seven times one are seven.

I am old, so old I can write a letter;
My birthday lessons are done;
The lambs play always, they know no better,—
They are only one times one.

O Moon! in the night I have seen you sailing
And shining so round and low;
You were bright, ah, bright! but your light is failing,—
You are nothing now but a bow.

You Moon, have you done something wrong in heaven,
That God has hidden your face?
I hope if you have, you'll soon be forgiven,
And shine again in your place.

O velvet bee, you're a dusty fellow;
You've powdered your legs with gold!
O brave marshmary buds, rich and yellow,
Give me your money to hold!

O columbine, open your folded wrapper,
Where two twin turtle-doves dwell!
O cuckoo-pint, toll me the purple clapper
That hangs in your clear green bell!

And show me your nest, with the young ones in it,—
I will not steal them away;
I am old! you may trust me, linnet, linnet,—
I am seven times one to-day.

—*Jean Ingelow.*

Good Night

Good night! Good night!
Far flies the light;
But still God's love
Shall flame above,
Making all bright.
Good night! Good night!

—*Victor Hugo.*

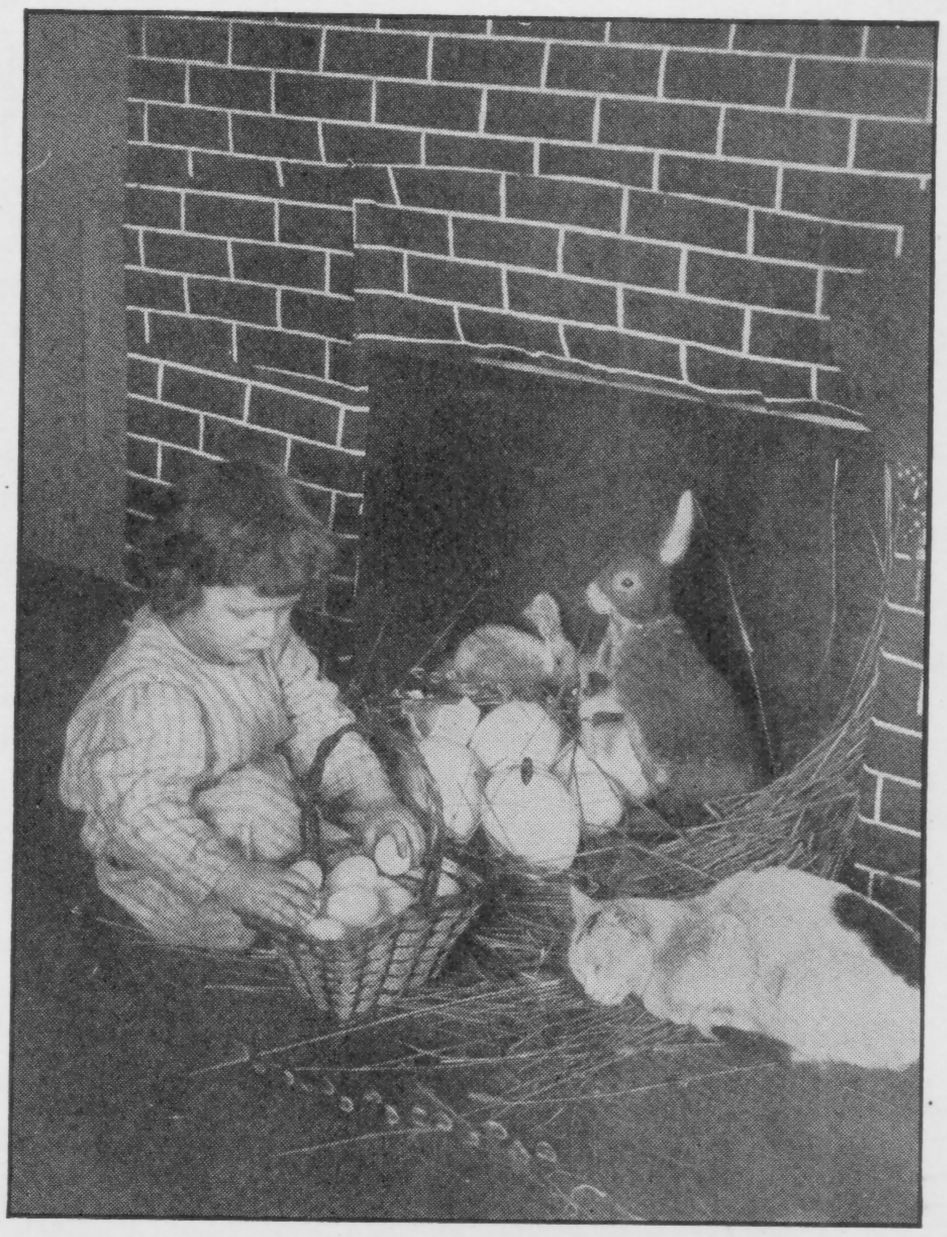
One, Two, Three

It was an old, old, old, old lady,
And a boy that was half-past three;
And the way that they played together
Was beautiful to see.

She couldn't go running and jumping,
And the boy, no more could he,
For he was a thin little fellow,
With a thin little twisted knee.

They sat in the yellow sunlight
Out under the maple tree;
And the game that they played I'll tell you
Just as it was told to me.

It was Hide-and-go-seek they were playing,
Though you'd never have known it to be—



The Easter Rabbit's Eggs

With an old, old, old, old lady,
And a boy with a twisted knee.

The boy would bend his face down
On his one little sound right knee,
And he'd guess where she was hiding,
In guesses One, Two, Three.

"You are in the china closet,"
He would cry, and laugh with glee—
It wasn't the china closet;
But he still had Two and Three.

"You are up in papa's big bedroom,
In the chest with the queer old key."
And she said: "You are warm and warmer;
But you're not quite right," said she.

"It can't be the little cupboard
Where mamma's things used to be;
So it must be the clothes-press, grandma."
And he found her with his Three.

Then she covered her face with her fingers,
That were wrinkled and white and wee,
And she guessed where the boy was hiding,
With a One and a Two and a Three.

And they never had stirred from their places,
Out under the maple tree—
This old, old, old, old lady
And the boy with the lame little knee—
This dear, dear, dear old lady,
And the boy who was half-past three.

—*H. C. Bunner.*

Stop, Stop, Pretty Water

"Stop, stop, pretty water!"
Said Mary one day,
To a frolicsome brook
That was running away.

"You run on so fast!
I wish you would stay:
My boat and my flowers
You will carry away.

"But I will run after;
Mother says that I may;
For I would know where
You are running away."

So Mary ran on;
But I have heard say,
That she never could find
Where the brook ran away.

—*Mrs. Follen.*

My Bed Is a Boat

My bed is like a little boat;
Nurse helps me in when I embark;
She girds me in my sailor's coat
And starts me in the dark.

At night, I go on board and say
Good night to all my friends on shore;
I shut my eyes and sail away
And see and hear no more.

And sometimes things to bed I take,
As prudent sailors have to do;
Perhaps a slice of wedding-cake,
Perhaps a toy or two.

All night across the dark we steer;
But when the day returns at last,
Safe in my room, beside the pier,
I find my vessel fast.

—*Robert Louis Stevenson.*

Praying and Loving

He prayeth best who loveth best
All things both great and small;
For the dear God who loveth us,
He made and loveth all.

—*Samuel Taylor Coleridge.*

Abou Ben Adhem

Abou Ben Adhem (may his tribe increase!)
Awoke one night from a deep dream of peace,
And saw within the moonlight in his room,
Making it rich and like a lily in bloom,
An angel writing in a book of gold.

Exceeding peace had made Ben Adhem bold;
And to the presence in the room he said,
"What writest thou?" The vision raised its head,
And, with a look made of all sweet accord,
Answered, "The names of those who love the Lord."

"And is mine one?" said Abou. "Nay, not so,"
Replied the angel. Abou spoke more slow,
But cheerily still; and said, "I pray thee, then,
Write me as one that loves his fellow-men."

The angel wrote, and vanished. The next night
It came again, with a great wakening light,
And showed the names whom love of God had blessed;
And, lo! Ben Adhem's name led all the rest. —*Leigh Hunt.*

The Village Blacksmith

Under a spreading chestnut-tree
The village smithy stands;
The smith, a mighty man is he,
With large and sinewy hands;
And the muscles of his brawny arms
Are strong as iron bands.

His hair is crisp, and black, and long,
His face is like the tan;
His brow is wet with honest sweat,
He earns whate'er he can,
And looks the whole world in the face
For he owes not any man.

Week in, week out, from morn till night,
You can hear his bellows blow;
You can hear him swing his heavy sledge
With measured beat and slow,
Like a sexton ringing the village bell,
When the evening sun is low.

And children coming home from school
Look in at the open door;
They love to see the flaming forge,
And hear the bellows roar,
And catch the burning sparks that fly
Like chaff from a threshing floor.

He goes on Sunday to the church,
And sits among his boys;
He hears the parson pray and preach,
He hears his daughter's voice,
Singing in the village choir,
And it makes his heart rejoice.

It sounds to him like her mother's voice,
Singing in Paradise!
He needs must think of her once more,
How in the grave she lies;
And with his hard, rough hand he wipes
A tear out of his eyes.

Toiling,—rejoicing,—sorrowing,
Onward through life he goes;
Each morning sees some task begin,
Each evening sees it close;
Something attempted, something done,
Has earned a night's repose.

Thanks, thanks to thee, my worthy friend,
For the lesson thou hast taught!
Thus at the flaming forge of life
Our fortunes must be wrought;
Thus on its sounding anvil shaped
Each burning deed and thought! —*H. W. Longfellow.*

To a Waterfowl

Whither, 'midst falling dew,
While glow the heavens with the last steps of day,
Far, through their rosy depths, dost thou pursue
Thy solitary way?

Vainly the fowler's eye
Might mark thy distant flight to do thee wrong,
As, darkly painted on the crimson sky,
Thy figure floats along.

Seek'st thou the plashy brink
Of weedy lake, or marge of river wide,
Or where the rocking billows rise and sink
On the chafed ocean side?

There is a Power whose care
Teaches thy way along that pathless coast,—
The desert and illimitable air,—
Lone wandering, but not lost.

All day thy wings have fann'd,
At that far height, the cold, thin atmosphere;
Yet stoop not, weary, to the welcome land,
Though the dark night is near.

And soon that toil shall end;
Soon shalt thou find a summer home, and rest
And scream among thy fellows; reeds shall bend
Soon o'er thy sheltered nest.

Thou'rt gone—the abyss of heaven
Hath swallowed up thy form—yet on my heart
Deeply hath sunk the lesson thou hast given,
And shall not soon depart.

He, who from zone to zone
Guides through the boundless sky thy certain flight,
In the long way that I must tread alone,
Will lead my steps aright. —*William Cullen Bryant.*

The Chambered Nautilus

This is the ship of pearl, which, poets feign,
Sails the unshadowed main,—
The venturous bark that flings
On the sweet summer wind its purpled wings
In gulfs enchanted, where the Siren sings,
And coral reefs lie bare,
Where the cold sea-maids rise to sun their streaming hair.

Its webs of living gauze no more unfurl;
Wrecked is the ship of pearl!
And every chambered cell,
Where its dim dreaming life was wont to dwell,
As the frail tenant shaped his growing shell,
Before thee lies revealed,—
Its irised ceiling rent, its sunless crypt unsealed!

Year after year beheld the silent toil
That spread his lustrous coil;
Still, as the spiral grew,
He left the past year's dwelling for the new,
Stole with soft step its shining archway through,
Built up its idle door,
Stretched in his last-found home, and knew the old no more.

Thanks for the heavenly message brought by thee,
Child of the wandering sea,
Cast from her lap, forlorn!
From thy dead lips a clearer note is born
Than ever Triton blew from wreathéd horn!

Dr. Charles W. Eliot, President Emeritus of Harvard University, says that there are three poems every child should know. They are "The Village Blacksmith," by Henry Wadsworth Longfellow, "Abou Ben Adhem," by Leigh Hunt, and "To a Waterfowl," by William Cullen Bryant. He gives for his reasons that the first named is a beautiful picture of some of the best parts of human experience: that the second is a very compact statement of the theory of many persons about character, and that the third is the simplest possible presentation to a child's mind of the loving Fatherhood of God.

While on mine ear it rings,
Through the deep caves of thought I hear a voice that sings:—

Build thee more stately mansions, O my soul,
As the swift seasons roll!
Leave thy low-vaulted past!
Let each new temple, nobler than the last,
Shut thee from heaven with a dome more vast,
Till thou at length art free,
Leaving thine outgrown shell by life's unresting sea!

—*Oliver Wendell Holmes.*

Lochinvar

Oh, young Lochinvar is come out of the west!
Through all the wide Border his steed is the best;
And save his good broadsword he weapons had none;
He rode all unarm'd and he rode all alone.
So faithful in love, and so dauntless in war,
There never was knight like the young Lochinvar!

He stay'd not for brake, and he stopp'd not for stone;
He swam the Eske river where ford there was none;
But ere he alighted at Netherby gate,
The bride had consented; the gallant came late;
For a laggard in love and a dastard in war
Was to wed the fair Ellen of brave Lochinvar.

So boldly he enter'd the Netherby Hall,
Among bridesmen and kinsmen and brothers and all;—
Then spoke the bride's father, his hand on his sword,
For the poor craven bridegroom said never a word,
"Oh, come ye in peace here, or come ye in war,
Or to dance at our bridal, young Lord Lochinvar?"

"I long wooed your daughter, my suit you denied;
Love swells like the Solway, but ebbs like its tide;
And now am I come with this lost Love of mine
To lead but one measure, drink one cup of wine.
There are maidens in Scotland more lovely by far,
That would gladly be bride to the young Lochinvar."

The bride kissed the goblet, the knight took it up,
He quaff'd off the wine, and he threw down the cup;
She look'd down to blush, and she look'd up to sigh,
With a smile on her lips and a tear in her eye:—
He took her soft hand ere her mother could bar;—
"Now tread we a measure!" said young Lochinvar.

So stately his form, and so lovely her face,
That never a hall such a galliard did grace:
While her mother did fret and her father did fume,
And the bridegroom stood dangling his bonnet and plume;
And the bride-maidens whispered, " 'Twere better by far
To have match'd our fair cousin with young Lochinvar!"

One touch to her hand and one word in her ear,
When they reach'd the hall door; and the charger stood near;
So light to the croup the fair lady he swung,
So light to the saddle before her he sprung!
"She is won! we are gone, over bank, bush, and scaur;
They'll have fleet steeds that follow!" quoth young Lochinvar.

There was mounting 'mong Graemes of the Netherby clan;
Forsters, Fenwicks and Musgraves, they rode and they ran;
There was racing and chasing on Cannobie Lee;
But the lost bride of Netherby ne'er did they see:—
So daring in love, and so dauntless in war,
Have ye e'er heard of gallant like young Lochinvar?

—*Sir Walter Scott.*

Song of the Sea

The sea! the sea! the open sea!
The blue, the fresh, the ever free!
Without a mark, without a bound,
It runs the earth's wide regions round;
It plays with the clouds; it mocks the skies,
Or like a cradled creature lies.

I'm on the sea! I'm on the sea!
I am where I would ever be,
With the blue above and the blue below,
And silence wheresoe'er I go.
If the storm should come and awake the deep
What matter? I shall ride and sleep.

I love, oh! how I love to ride
On the fierce, foaming, bursting tide,
When every mad wave drowns the moon,
Or whistles aloud his tempest tune,
And tells how goeth the world below,
And why the southwest blasts do blow.

I never was on the dull, tame shore,
But I loved the great sea more and more,
And back I flew to her billowy breast,
Like a bird that seeks its mother's nest;
And a mother she *was* and *is* to me,
For I was born on the deep blue sea!

And I have lived, in calm and strife,
Fully fifty summers a sailor's life,
With wealth to spend and power to range,
But never have sought or sighed for change;
And Death, whenever he comes to me,
Shall come on the wild and boundless sea.

—*Barry Cornwall.*

The Ballad of the Tempest

We were crowded in the cabin,—
Not a soul would dare to sleep—
It was midnight on the waters,
And a storm was on the deep.

'Tis a fearful thing in winter
To be shattered by the blast,
And to hear the rattling trumpet
Thunder, "Cut away the mast!"

So we shuddered there in silence,—
For the stoutest held his breath,
While the hungry sea was roaring,
And the breakers talked with Death.

As thus we sat in darkness,
Each one busy with his prayers,—
"We are lost!' the captain shouted,
As he staggered down the stairs.

But his little daughter whispered,
As she took his icy hand,
"Isn't God upon the ocean,
Just the same as on the land?"

Then we kissed the little maiden,
And we spoke in better cheer,
And we anchored safe in harbour
When the morn was shining clear.

—*James T. Fields.*

Our Flag

We pledge allegiance to our flag,
To it we will be true,
We will defend it with our lives,
Our own Red, White and Blue.

The white, it stands for purity,
For faith and truth, the blue,
The red, for courage, bold and strong,
There's meaning in each hue.

We love the stars, the many stars
Upon their field of blue,
We love the stripes of red and white,
We know their meaning too.

"Star Spangled Banner," it is called,
Sometimes, "Old Glory," too,
Sometimes, "The Banner of the Free,"
Our own Red, White and Blue.

We pledge allegiance to our flag,
To it we will be true,
We will defend it with our lives,
Our own Red, White and Blue.

The Land of Counterpane

When I was sick and lay a-bed,
I had two pillows at my head,
And all my toys beside me lay
To keep me happy all the day.

And sometimes for an hour or so
I watched my leaden soldiers go,
With different uniforms and drills,
Among the bed-clothes, through the hills;

And sometimes sent my ships in fleets
All up and down among the sheets;
Or brought my trees and houses out,
And planted cities all about.

I was the giant great and still
That sits upon the pillow-hill,
And sees before him, dale and plain,
The pleasant land of counterpane.

—*Robert Louis Stevenson.*

The Burial of Moses

By Nebo's lonely mountain,
On this side Jordan's wave,
In a vale in the land of Moab
There lies a lonely grave.
And no man knows that sepulchre,
And no man saw it e'er,
For the angels of God upturn'd the sod
And laid the dead man there.

That was the grandest funeral
That ever pass'd on earth;
But no man heard the trampling,
Or saw the train go forth!
Noiselessly as the daylight
Comes back when night is done,
And the crimson streak on ocean's cheek
Grows into the great sun,—

Noiselessly as the springtime
Her crown of verdure weaves,
And all the trees on all the hills
Open their thousand leaves,—
So without sound of music,
Or voice of them that wept,
Silently down from the mountain's crown
The great procession swept.

Perchance the bald old eagle
On gray Beth-peor's height,
Out of his lonely eyrie
Look'd on the wondrous sight;
Perchance the lion, stalking,
Still shuns that hallow'd spot,
For beast and bird have seen and heard
That which man knoweth not.

But when the warrior dieth,
His comrades in the war,
With arms reversed and muffled drum,
Follow his funeral car;
They show the banners taken,
They tell his battles won,
And after him lead his masterless steed,
While peals the minute gun.

Amid the noblest of the land
We lay the sage to rest,
And give the bard an honor'd place,
With costly marble drest,
In the great minster transept
Where lights like glories fall,
And the organ rings, and the sweet choir sings
Along the emblazon'd wall.

This was the truest warrior
That ever buckled sword;
This the most gifted poet
That ever breathed a word;
And never earth's philosopher
Traced, with his golden pen,
On the deathless page, truths half so sage
As he wrote down for men.

And had he not high honor,—
The hillside for a pall,
To lie in state while angels wait
With stars for tapers tall,
And the dark rock-pines like tossing plumes,
Over his bier to wave,
And God's own hand, in that lonely land,
To lay him in the grave?

In that strange grave without a name,
Whence his uncoffin'd clay
Shall break again, O wondrous thought!
Before the judgment day,
And stand with glory wrapt around
On the hills he never trod,
And speak of the strife that won our life
With the Incarnate Son of God.

O lonely grave in Moab's land
O dark Beth-peor's hill!
Speak to these curious hearts of ours,
And teach them to be still.
God hath His mysteries of grace,
Ways that we cannot tell;
He hides them deep like the hidden sleep
Of him he loved so well.

—*Cecil F. Alexander.*

Rover in Church

'Twas a Sunday morning in early May,
A beautiful, sunny, quiet day,
And all the village, old and young,
Had trooped to church when the church bell rung.
The windows were open, and breezes sweet
Fluttered the hymn-books from seat to seat.
Even the birds in the pale-leaved birch
Sang as softly as if in church!

Right in the midst of the minister's prayer
There came a knock at the door. "Who's there,
I wonder?" the gray-haired sexton thought,
As his careful ear the tapping caught.
Rap-rap, rap-rap—a louder sound,—
The boys on the back seats turned around.
What could it mean? for never before
Had any one knocked at the old church door.
Again the tapping, and now so loud
The minister paused (though his head was bowed).
Rappety-rap! This will never do;
The girls are peeping, and laughing too!
So the sexton tripped o'er the creaking floor,
Lifted the latch, and opened the door.

In there trotted a big black dog,
As big as a bear! With a solemn jog
Right up the center aisle he pattered;
People might stare, it little mattered.
Straight he went to a little maid,
Who blushed and hid, as though afraid,
And there sat down, as if to say:
"I'm sorry that I was late today;
But better late than never, you know,
Besides, I waited an hour or so,
And couldn't get them to open the door,
Till I wagged my tail and bumped the floor.
Now, little mistress, I'm going to stay,
And hear what the minister has to say."

The poor little girl hid her face and cried!
But the big dog nestled close to her side,
And kissed her, dog fashion, tenderly,
Wondering what the matter could be!
The dog being large (and the sexton small),
He sat through the sermon, and heard it all,
As solemn and wise as any one there,
With a very dignified, scholarly air.
And instead of scolding, the minister said,
As he laid his hand on the sweet child's head
After the service, "I never knew
Two better list'ners than Rover and you!"

—*James Buckham.*

A Visit from St. Nicholas

'Twas the night before Christmas, when all through the house
Not a creature was stirring, not even a mouse;
The stockings were hung by the chimney with care,
In hopes that St. Nicholas soon would be there;
The children were nestled all snug in their beds,
While visions of sugar-plums danced in their heads;
And mamma in her 'kerchief, and I in my cap,
Had just settled our brains for a long winter's nap—
When out on the lawn there arose such a clatter,
I sprang from my bed to see what was the matter.
Away to the window I flew like a flash,
Tore open the shutters and threw up the sash.
The moon on the breast of the new-fallen snow
Gave a luster of mid-day to objects below;
When, what to my wondering eyes should appear,
But a miniature sleigh and eight tiny reindeer,
With a little old driver, so lively and quick,
I knew in a moment it must be St. Nick.

More rapid than eagles his coursers they
  came,
And he whistled, and shouted, and called
  them by name:
"Now, Dasher! now, Dancer! now,
  Prancer and Vixen!
On, Comet! on, Cupid! on, Donder and
  Blitzen!—
To the top of the porch! to the top of
  the wall!
Now, dash away, dash away, dash away
  all!"
As dry leaves that before the wild hurri-
  cane fly,
When they meet with an obstacle, mount
  to the sky,
So, up to the housetop the coursers they
  flew,
With a sleigh full of toys—and St. Nich-
  olas, too.
And then, in a twinkling, I heard on the
  roof
The prancing and pawing of each little
  hoof.
As I drew in my head and was turning
  around,
Down the chimney St. Nicholas came
  with a bound.
He was dressed all in fur from his head
  to his foot,
And his clothes were all tarnished with
  ashes and soot;
A bundle of toys he had flung on his
  back,
And he looked like a peddler just open-
  ing his pack.
His eyes—how they twinkled! his dimples
  how merry!
His cheeks were like roses, his nose like
  a cherry!
His droll little mouth was drawn up like
  a bow,
And the beard on his chin was as white
  as the snow;
The stump of a pipe he held tight in his
  teeth,
And the smoke, it encircled his head like
  a wreath;
He had a broad face, and a little round
  belly
That shook when he laughed, like a bowl
  full of jelly.
He was chubby and plump—a right jolly
  old elf;
And I laughed when I saw him, in spite
  of myself.
A wink of his eye, and a twist of his
  head,
Soon gave me to know I had nothing to
  dread.
He spoke not a word, but went straight
  to his work,
And filled all the stockings: then turned
  with a jerk,
And laying his finger aside of his nose,
And giving a nod, up the chimney he
  rose.
He sprang to his sleigh, to his team
  gave a whistle,
And away they all flew like the down on
  a thistle.
But I heard him exclaim, ere he drove
  out of sight,
"Happy Christmas to all, and to all a
  good-night!"

—*Clement C. Moore.*

Tubal Cain

Old Tubal Cain was a man of might,
  In the days when Earth was young;
By the fierce red light of his furnace
  bright,
  The strokes of his hammer rung;
And he lifted high his brawny hand,
  O'er the iron glowing clear,
Till the sparks rushed out in scarlet
  showers,
  As he fashioned the sword and spear.
And he sang, "Hurrah for my handiwork!
  Hurrah for the spear and the sword!
Hurrah for the hand that shall wield
  them well,
  For he shall be king and lord."

To Tubal Cain came many a one,
  As he wrought by his roaring fire,
And each one prayed for a strong steel
  blade
  As the crown of his desire;
And he made them weapons sharp and
  strong,
  Till they shouted loud for glee,
And gave him gifts of pearl and gold,
  And spoils of the forest free.
And they sang, "Hurrah for Tubal Cain,
  Who hath given us strength anew!
Hurrah for the smith! Hurrah for the
  fire,
  And hurrah for the metal true!"

But a sudden change came o'er his heart,
  Ere the setting of the sun,
And Tubal Cain was filled with pain
  For the evil he had done.
He saw that men, with rage and hate,
  Made war upon their kind,
That the land was red with the blood
  they shed,
  In their lust for carnage blind.
And he said, "Alas! that ever I made,
  Or that skill of mine should plan,
The spear and the sword for men whose
  joy
  Is to slay their fellow-man!"

And for many a day old Tubal Cain
  Sat brooding o'er his woe;
And his hand forbore to smite the ore,
  And his furnace smoldered low.
But he rose at last with a cheerful face,
  And a bright, courageous eye,
And bared his strong right arm for work,
  While the quick flames mounted high.
And he sang, "Hurrah for my handi-
  craft!"
  And the red sparks lit the air;
"Not alone for the blade was the bright
  steel made,"
  And he fashioned the first plowshare.

And men, taught wisdom from the past,
  In friendship joined their hands,
Hung the sword in the hall, the spear on
  the wall,
  And plowed the willing lands;
And sang, "Hurrah for Tubal Cain!
  Our stanch good friend is he;
And for the plowshare and the plow,
  To him our praise shall be.
But while oppression lifts its head,
  Or a tyrant would be lord,
Though we may thank him for the plow,
  We'll not forget the sword!"

—*Charles Mackay.*

The Wind and the Moon

Said the Wind to the Moon, "I will blow
  you out.
    You stare in the air
    Like a ghost in a chair,
Always looking what I am about.
I hate to be watched; I will blow you out."

The Wind blew hard, and out went the
  Moon.
    So, deep on a heap
    Of clouds, to sleep
Down lay the Wind, and slumbered soon—
Muttering low, "I've done for that Moon."

He turned in his bed: she was there
  again!
    On high in the sky,
    With her one ghost eye,
The Moon shone white and alive and
  plain.
Said the Wind, "I will blow you out
  again."

The Wind blew hard, and the Moon grew
  dim.
    "With my sledge and my wedge
      I have knocked off her edge!
If only I blow right fierce and grim,
The creature will soon be dimmer than
  dim."

The reading and appreciation of good poetry is a habit; like all habits, it is best formed young. Early familiarity with some of the masterpieces in art and literature will enable the child "to translate forms of beauty into thought and thought into words" and thus prove a never-failing source of happiness. The lovely things men build in the days of their strength are but the reproduction of the lovely thoughts that were whispered in their hearts in the days of tender youth.

He blew and he blew, and she thinned to a thread.
"One puff more's enough
To blow her to snuff!
One good puff more where the last was bred,
And glimmer, glimmer glum will go the thread."

He blew a great blast, and the thread was gone.
In the air nowhere
Was a moonbeam bare;
Far off and harmless the shy stars shone:
Sure and certain the Moon was gone!

The Wind he took to his revels once more;
On down, in town,
Like a merry-mad clown,
He leaped and halloed with whistle and roar—
"What's that?" The glimmering thread once more!

He flew in a rage—he danced and blew;
But in vain was the pain
Of his bursting brain;
For still the broader the moon-scrap grew,
The broader he swelled his big cheeks and blew.

Slowly she grew—till she filled the night,
And shone on her throne
In the sky alone,
A matchless, wonderful, silvery light,
Radiant and lovely, the queen of the night.

Said the Wind: "What a marvel of power am I!
With my breath, good faith!
I blew her to death—
First blew her away right out of the sky—
Then blew her in; what a strength am I!"

But the Moon she knew nothing about the affair,
For, high in the sky,
With her one white eye,
Motionless miles above the air,
She had never heard the great Wind blare.

—*George Macdonald.*

Columbus

Behind him lay the gray Azores,
Behind the Gates of Hercules;
Before him not the ghost of shores,
Before him only shoreless seas.
The good mate said: "Now must we pray,
For lo! the very stars are gone.
Brave Admiral, speak; what shall I say?"
"Why, say: 'Sail on! sail on! and on!'"

"My men grow mutinous day by day;
My men grow ghastly wan and weak."
The stout mate thought of home; a spray
Of salt wave washed his swarthy cheek.
"What shall I say, brave Admiral, say,
If we sight naught but seas at dawn?"
"Why, you shall say at break of day,
'Sail on! sail on! sail on! and on!'"

They sailed and sailed, as winds might blow,
Until at last the blanched mate said:
"Why, now not even God would know
Should I and all my men fall dead.
These very winds forget their way,
For God from these dread seas is gone.
Now speak, brave Admiral, speak and say—"
He said: "Sail on! sail on! and on!"

They sailed. They sailed. Then spake the mate:
"This mad sea shows his teeth tonight.
He curls his lip, he lies in wait,
With lifted teeth, as if to bite!
Brave Admiral, say but one good word:
What shall we do when hope is gone?"
The words leapt like a leaping sword:
"Sail on! sail on! sail on! and on!"

Then, pale and worn, he kept his deck,
And peered through darkness. Ah, that night
Of all dark nights! And then a speck—
A light! a light! a light! a light!
It grew, a starlit flag unfurled!
It grew to be Time's burst of dawn.
He gained a world; he gave that world
Its grandest lesson: "On! sail on!"

—*Joaquin Miller.*

The Burial of Sir John Moore

Not a drum was heard, not a funeral note,
As his corse to the rampart we hurried;
Not a soldier discharged his farewell shot
O'er the grave where our hero we buried.

We buried him darkly at dead of night,
The sods with our bayonets turning;
By the struggling moonbeam's misty light
And the lantern dimly burning.

No useless coffin enclosed his breast,
Not in sheet nor in shroud we wound him;
But he lay like a warrior taking his rest
With his martial cloak around him.

Few and short were the prayers we said,
And we spoke not a word of sorrow;
But we steadfastly gazed on the face of the dead,
And we bitterly thought of the morrow.

We thought as we hollowed his narrow bed,
And smoothed down his lonely pillow,
That the foe and the stranger would tread o'er his head
And we far away on the billow!

Lightly they'll talk of the spirit that's gone
And o'er his cold ashes upbraid him,—
But little he'll reck, if they let him sleep on
In the grave where a Briton has laid him.

But half of our heavy task was done,
When the clock struck the hour for retiring;
And we heard the distant and random gun
That the foe was sullenly firing.

Slowly and sadly we laid him down,
From the field of his fame fresh and gory;
We carved not a line, and we raised not a stone—
But we left him alone with his glory.

—*Charles Wolfe.*

The Little Brown Wren

There's a little brown wren that has built in our tree,
And she's scarcely as big as a big bumblebee;
She has hollowed a house in the heart of a limb,
And made the walls tidy, and made the floor trim
With the down of the crow's foot, with tow, and with straw,
The cosiest dwelling that ever you saw.

This little brown wren has the brightest of eyes,
And a foot of very diminutive size;
Her tail is as trig as the sail of a ship;
She's demure, though she walks with a hop and a skip;
And her voice—but a flute were more fit than a pen
To tell of the voice of the little brown wren.

One morning Sir Sparrow came sauntering by,
And cast at the wren's house an envious eye;
With a strut of bravado and toss of his head,
"I'll put in my claim here," the bold fellow said;
So straightway he mounted on impudent wing,
And entered the door without pausing to ring.

An instant—and swiftly that feathery knight,
All towsled and tumbled, in terror took flight,
While there by the door on her favorite perch
As neat as a lady just starting for church,
With this song on her lip, "He will not call again
Unless he is asked," said the little brown wren.

Rain

The rain is raining all around,
It falls on field and tree,
It rains on the umbrellas here,
And on the ships at sea.

—*Robert Louis Stevenson.*

Darius Green and His Flying Machine

The author of the poem, John Townsend Trowbridge, first saw a flying-machine sixty years after he wrote this poem. He was then eighty-three years old.

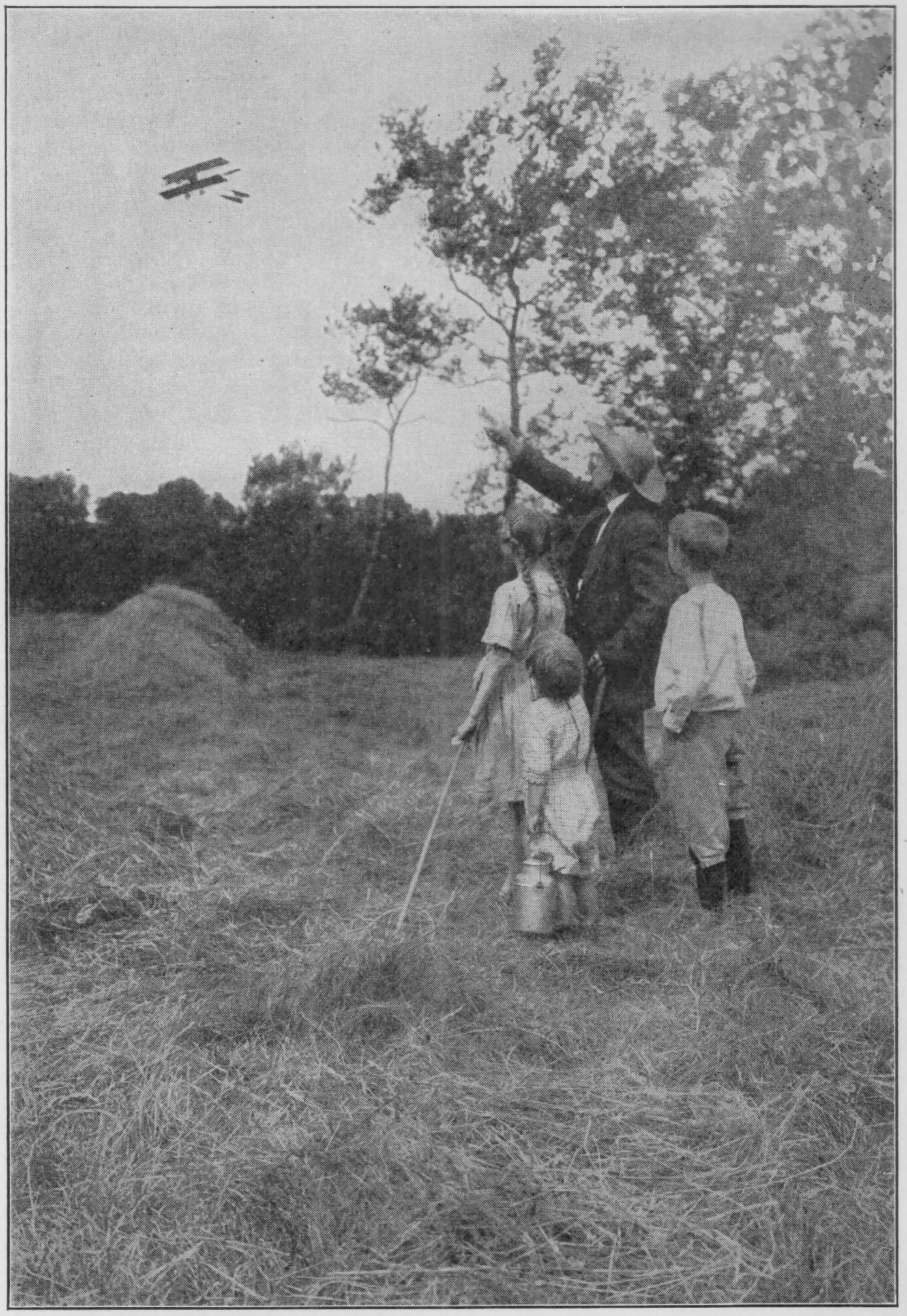
If ever there lived a Yankee lad,
Wise or otherwise, good or bad,
Who, seeing the birds fly, didn't jump
With flapping arms from stake or stump,
Or, spreading the tail
Of his coat for a sail,
Take a soaring leap from post or rail,
And wonder why
He couldn't fly,
And flap and flutter and wish and try—
If ever you knew a country dunce
Who didn't try that as often as once,
All I can say is, that's a sign
He never would do for a hero of mine.

An aspiring genius was D. Green:
The son of a farmer,—age fourteen;
His body was long and lank and lean,—
Just right for flying, as will be seen;
He had two eyes, each bright as a bean,
And a freckled nose that grew between,
A little awry,—for I must mention
That he had riveted his attention
Upon his wonderful invention,
Twisting his tongue as he twisted the strings,
Working his face as he worked the wings,
And with every turn of gimlet and screw
Turning and screwing his mouth round, too,
Till his nose seemed bent
To catch the scent,
Around some corner, of new-baked pies,
And his wrinkled cheeks and his squinting eyes
Grew puckered into a queer grimace,
That made him look very droll in the face,
And also very wise.

And wise he must have been, to do more
Than ever a genius did before,
Excepting Daedalus of yore
And his son Icarus, who wore
Upon their backs
Those wings of wax
He had read of in the old almanacs.
Darius was clearly of the opinion
That the air is also man's dominion,
And that, with paddle or fin or pinion,
We soon or late
Shall navigate
The azure as now we sail the sea.
The thing looks simple enough to me;
And if you doubt it,
Hear how Darius reasoned about it.

"Birds can fly,
An' why can't I?
Must we give in,"
Says he with a grin,
"'T the bluebird an' phoebe
Are smarter'n we be?

Jest fold our hands an see the swaller,
An' blackbird an' catbird beat us holler?



The Modern Darius Green and His Flying Machine

Does the leetle, chatterin', sassy wren,
No bigger'n my thumb, know more than men?
Jest show me that!
Er prove 't the bat
Has got more brains than's in my hat,
An' I'll back down an' not till then!"

He argued further: "Ner I can't see
What's th' use o' wings to a bumblebee,
Fer to git a livin' with, more'n to me;—
Ain't my business
Important's his'n is?
That Icarus
Was a silly cuss,—
Him an' his daddy Daedalus.
They might 'a' knowed wings made o' wax
Wouldn't stan' sun-heat an' hard whacks,
I'll make mine o' luther,
Er suthin' or other."

And he said to himself, as he tinkered and planned:

"But I ain't goin' to show my hand
To mummies that never can understand
The fust idee that's big an' grand.
They'd 'a' laft an' made fun
O' Creation itself afore 't was done!"
So he kept his secret from all the rest,
Safely buttoned within his vest;
And in the loft above the shed
Himself he locks, with thimble and thread
And wax and hammer and buckles and screws,
And all such things as geniuses use;—
Two bats for pattern, curious fellows!
A charcoal-pot and a pair of bellows;
An old hoop-skirt or two, as well as
Some wire and several old umbrellas;
A carriage-cover, for tail and wings;
A piece of harness; and straps and strings;
And a big strong box,
In which he locks
These and a hundred other things.

His grinning brothers, Reuben and Burke
And Nathan and Jotham and Solomon, lurk
Around the corner to see him work,—
Sitting cross-legged, like a Turk,
Drawing the waxed end through with a jerk,
And boring the holes with a comical quirk
Of his wise old head, and a knowing smirk.
But vainly they mounted each other's backs,
And poked through knot-holes and pried through cracks;
With wood from the pile and straw from the stacks
He plugged the knot-holes and calked the cracks;
And a bucket of water, which one would think
He had brought up into the loft to drink
When he chanced to be dry,
Stood always nigh,
For Darius was sly!
And whenever at work he happened to spy
At chink or crevice a blinking eye,
He let a dipper of water fly.
"Take that! an' ef ever ye get a peep,
Guess ye'll ketch a weasel asleep!"
And he sings as he locks
His big strong box:—
"The weasel's head is small an' trim,
An' he is leetle an' long an' slim,
An' quick of motion an' nimble of limb,
An' ef you'll be
Advised by me
Keep wide awake when ye're ketchin him!"

So day after day
He stitched and tinkered and hammered away,
Till at last 'twas done,—
The greatest invention under the sun!
"An' now," says Darius, "hooray fer some fun!"

'Twas the Fourth of July,
And the weather was dry,
And not a cloud was on all the sky,
Save a few light fleeces, which here and there,
Half mist, half air,
Like foam on the ocean went floating by:
Just as lovely a morning as ever was seen
For a nice little trip in a flying-machine.

Thought cunning Darius: "'Now I shan't go
Along 'ith the fellers to see the show.
I'll say I've got sich a terrible cough!
An' then, when the folks hev all gone off
I'll hev full swing
Fer to try the thing,
An' practyse a leetle on the wing."
"Ain't goin' to see the celebration?"
Says Brother Nate. "No; botheration!
I've got sich a cold—a toothache—I—
My gracious—feel's though I should fly!"
Said Jotham, "Sho!
Guess ye better go."
But Darius said, "No!
Shouldn't wonder 'f yeou might see me, though,
'Long 'bout noon, ef I git red
O' this jumpin', thumpin' pain 'n my head."
For all the while to himself he said:—
"I'll tell ye what!
I'll fly a few times around the lot,
To see how 't seems, then soon's I've got
The hang o' the thing, ez likely's not,
I'll astonish the nation,
And all creation,
By flyin' over the celebration!
Over their heads I'll sail like an eagle;
I'll balance myself on my wings like a sea-gull;
I'll dance on the chimbleys; I'll stan' on the steeple;
I'll flop up to the winders an' scare the people!
I'll light on the libbet'y-pole, an' crow;
An' I'll say to the gawpin' fools below,
'What world's this 'ere
That I've come near?'
Fer I'll make 'em believe I'm a chap f'm the moon!
An' I'll try a race 'ith their ol' bulloon."
He crept from his bed;
An, seeing the others were gone, he said,
I'm 'a' gittin' over the cold 'n my head."
And away he sped,
To open the wonderful box in the shed.

His brothers had walked but a little way
When Jotham to Nathan chanced to say,
"What on airth is he up to, hey?"
"Don'o',—the 's suthin' er other to pay,
Er he wouldn't 'a' stayed 't hum today."
Says Burke, "His toothache's all 'n his eye!
He never'd miss a Fo'th-o'-July,
Ef he hedn't got some machine to try.
Let's hurry back and hide in the barn,
An' pay him fer tellin' us that yarn!'
"Agreed!" Through the orchard they creep back,
Along by the fences, behind the stack,
And one by one, through a hole in the wall,
In under the dusty barn they crawl,
Dressed in their Sunday garments all;
And a very astonishing sight was that,
When each in his cobwebbed coat and hat
Came up through the floor like an ancient rat.
And there they hid;
And Reuben slid
The fastenings back, and the door undid.
"Keep dark!" said he,
"While I squint an' see what the' is to see."

As knights of old put on their mail,—
From head to foot
An iron suit,
Iron jacket and iron boot,
Iron breeches, and on the head
No hat, but an iron pot instead,
And under the chin the bail,—
I believe they called the thing a helm;
And the lid they carried they called a shield;
And, thus accoutred, they took the field,
Sallying forth to overwhelm
The dragons and pagans that plagued the realm:—
So this modern knight
Prepared for flight,
Put on his wings and strapped them tight;
Jointed and jaunty, strong and light;
Buckled them fast to shoulder and hip,—
Ten feet they measured from tip to tip!
And a helm had he, but that he wore,
Not on his head like those of yore,
But more like the helm of a ship.

"Hush!" Reuben said,
"He's up in the shed!
He's opened the winder,—I see his head!
He stretches it out,
An' pokes it about,
Lookin' to see 'f the coast is clear,
An' nobody near;—
Guess he don'o' who's hid in here!
He's riggin' a spring-board over the sill!
Stop laffin', Solomon! Burke, keep still!
He's a climbin' out now—of all the things!
What's he got? I van, it's wings!
An' that 'tother thing? I vum, it's a tail!
An' there he sets like a hawk on a rail!
Steppin' careful, he travels the length
Of his spring-board, and teeters to try its strength.
Now he stretches his wings, like a monstrous bat;
Peeks over his shoulder, this way an'that,
Fer to see 'f the's any one passin' by;
But the's on'y a ca'f an' a goslin' nigh.
They turn up at him a wonderin' eye,
To see—The dragon! he's goin' to fly!
Away he goes! Jimminy! what a jump!
Flop—flop—an' plump
To the ground with a thump!
Flutt'rin' an' flound'rin', all in a lump!"

As a demon is hurled by an angel's spear,
Heels over head, to his proper sphere,—
Heels over head, and head over heels,
Dizzily down the abyss he wheels,—
So fell Darius. Upon his crown,
In the midst of the barnyard, he came down,
In a wonderful whirl of tangled strings,
Broken braces and broken springs,
Broken tail and broken wings,
Shooting-stars, and various things!
Away with a bellow fled the calf,
And what was that? Did the gosling laugh?
'Tis a merry roar
From the old barn-door,
And he hears the voice of Jotham crying,
"Say, D'rius! how de yeou like flyin'?"
Slowly, ruefully, where he lay,
Darius just turned and looked that way,
As he stanched his sorrowful nose with his cuff.
"Wall, I like flyin' well enough,"

He said; "but the' ain't sich a thunderin' sight
O' fun in't when ye come tu light."

MORAL

I just have room for the moral here:
And this is the moral,—Stick to your sphere.
Or if you insist, as you have the right,
On spreading your wings for a loftier flight,
The moral is,—Take care how you light.

—*John T. Trowbridge.*

Somebody's Mother

The woman was old, and ragged, and gray,
And bent with the chill of a winter's day;
The streets were white with a recent snow,
And the woman's feet with age were slow.

At the crowded crossing she waited long,
Jostled aside by the careless throng
Of human beings who passed her by,
Unheeding the glance of her anxious eye.

Down the street with laughter and shout,
Clad in the freedom of "school let out,"
Come happy boys, like a flock of sheep,
Hailing the snow piled white and deep;
Past the woman, so old and gray,
Hastened the children on their way.

None offered a helping hand to her,
So weak and timid, afraid to stir
Lest the carriage wheels or the horses' feet
Should trample her down in the slippery street.

At last came out of the merry troop
The gayest boy of all the group;
He paused beside her, and whispered low,
"I'll help you across, if you wish to go."

Her aged hand on his strong young arm
She placed, and so without hurt or harm,
He guided the trembling feet along,
Proud that his own were young and strong;
Then back again to his friends he went,
His young heart happy and well content.

"She's somebody's mother, boys, you know,
For all she's aged, and poor, and slow;
And some one, some time, may lend a hand
To help my mother—you understand?—
If ever she's poor, and old, and gray,
And her own dear boy so far away."

"Somebody's mother" bowed low her head,
In her home that night, and the prayer she said
Was: "God, be kind to that noble boy,
Who is somebody's son, and pride, and joy."

Faint was the voice, and worn and weak,
But the Father hears when His children speak;
Angels caught the faltering word,
And "Somebody's Mother's" prayer was heard.

The White Carnation

Here's to the white carnation,
Sturdy and spicy and sweet,
Wafting a breath of perfume
On the stony way of the street;
Bringing a freight of gladness
Wherever the breezes blow;
Here's to the white carnation,
Pure as the virgin snow.

This is the flower for mother,
Wear it on Mother's Day;
Flower for rain and sunshine,
Winsome, gallant and gay.
Wear it in mother's honor,
Pinned to the coat's lapel;
Wear it in belt and corsage,
For her who loved you well.

For mother in lowly cabin,
Or mother in palace hall,
Is ever the kindest and dearest,
And ever the best of all.
In travail and pain she bore us,
In laughter and love she nursed;
And who would shame the mother
Is of all mankind accursed.

Tired and wan too often,
Weary and weak at times,
But always full of the courage
That thrills when the future chimes.
Mother with hands toil-hardened,
Mother in pearls and lace,
The light of heavenly beauty
Shines in her tender face.

So here's to the white carnation,
Wear it on Mother's Day;
Flower that blooms for mother,
Winsome, gallant and gay.
Flower of a perfect sweetness,
Flower for hut and hall,
Here's to the white carnation,
And to mother—Our Best of All.

—*Margaret E. Sangster.*

Who Loved Best?

"I love you, mother," said little John,
Then forgetting his work his cap went on,
And he was off to the garden swing,
Leaving his mother the wood to bring.

"I love you, mother," said little Nell,
"I love you better than tongue can tell."
Then she teased and pouted half the day,
Till mother rejoiced when she went to play.

"I love you, mother," said little Fan,
"Today I'll help you all I can."
To the cradle then she did softly creep,
And rocked the baby till it fell asleep.

Then stepping softly, she took the broom,
And swept the floor, and dusted the room;
Busy and happy all day was she,
Helpful and cheerful as child could be.

"I love you, mother," again they said—
Three little children, going to bed.
How do you think that mother guessed
Which of them really loved her best?

One Mother

Hundreds of stars in the pretty sky,
Hundreds of shells on the shore together,
Hundreds of birds that go singing by,
Hundreds of bees in the sunny weather;

Hundreds of dewdrops to greet the dawn,
Hundreds of lambs in the purple clover,
Hundreds of butterflies on the lawn,—
But only one mother the wide world over.

A Farewell

My fairest child, I have no song to give you;
No lark could pipe to skies so dull and gray;
Yet, ere we part, one lesson I can leave you
For every day.

Be good, sweet maid, and let who will be clever;
Do noble things, not dream them all day long:
And so make life, death, and that vast forever
One grand, sweet song.

—*Charles Kingsley.*

MOTHER'S DAY

The idea of a national Mother's Day originated with Miss Anna Jarvis of Philadelphia, and the second Sunday in May was the chosen day. A white carnation was designated as the flower to be worn in honor of Mother. On this day acts of kindness are done in the home, letters are written to mothers by children away from home, and sermons preached and services held in honor of the mothers of our land.

Song of the Brook

I come from haunts of coot and hern,
  I make a sudden sally,
And sparkle out among the fern,
  To bicker down a valley.

By thirty hills I hurry down,
  Or slip between the ridges,
By twenty thorps, a little town,
  And half a hundred bridges.

Till last by Philip's farm I flow
  To join the brimming river,
For men may come and men may go,
  But I go on for ever.

I chatter over stony ways,
  In little sharps and trebles,
I bubble into eddying bays,
  I babble on the pebbles.

With many a curve my banks I fret
  By many a field and fallow,
And many a fairy foreland set
  With willow-weed and mallow.

I chatter, chatter, as I flow
  To join the brimming river,
For men may come and men may go,
  But I go on for ever.

I wind about, and in and out,
  With here a blossom sailing,
And here and there a lusty trout,
  And here and there a grayling,

And here and there a foamy flake
  Upon me, as I travel
With many a silvery waterbreak
  Above the golden gravel,

And draw them all along, and flow
  To join the brimming river,
For men may come and men may go,
  But I go on for ever.

I steal by lawns and grassy plots,
  I slide by hazel covers;
I move the sweet forget-me-nots
  That grow for happy lovers.

I slip, I slide, I gloom, I glance,
  Among my skimming swallows;
I make the netted sunbeams dance
  Against my sandy shallows.

I murmur under moon and stars
  In brambly wildernesses;
I linger by my shingly bars;
  I loiter round my cresses;

And out again I curve and flow
  To join the brimming river,
For men may come and men may go,
  But I go on for ever.

—*Alfred Tennyson.*

June

From "The Vision of Sir Launfal"

And what is so rare as a day in June?
  Then, if ever, come perfect days;
Then Heaven tries earth if it be in tune,
  And over it softly her warm ear lays:
Whether we look, or whether we listen,
We hear life murmur, or see it glisten;
Every clod feels a stir of might,
  An instinct within it that reaches and towers,
And, groping blindly above it for light,
  Climbs to a soul in grass and flowers;
The flush of life may well be seen
  Thrilling back over hills and valleys;
The cowslip startles in meadows green,
  The buttercup catches the sun in its chalice,
And there's never a leaf or a blade too mean
  To be some happy creature's palace;
The little bird sits at his door in the sun,
  Atilt like a blossom among the leaves,
And lets his illumined being o'errun
  With the deluge of summer it receives;
His mate feels the eggs beneath her wings,
And the heart in her dumb breast flutters and sings;
He sings to the wide world, and she to her nest,—
In the nice ear of Nature which song is the best?

—*James Russell Lowell.*

Charge of the Light Brigade

Half a league, half a league,
  Half a league onward,
All in the valley of Death
  Rode the six hundred.
"Forward, the Light Brigade!
Charge for the guns!" he said:
Into the valley of Death
  Rode the six hundred.

"Forward, the Light Brigade!"
Was there a man dismay'd?
Not tho' the soldier knew
  Some one had blunder'd:
Theirs not to make reply,
Theirs not to reason why,
Theirs but to do and die:
Into the valley of Death
  Rode the six hundred.

Cannon to right of them,
Cannon to left of them,
Cannon in front of them
  Volley'd and thunder'd;
Storm'd at with shot and shell,
Boldly they rode and well,
Into the jaws of Death,
Into the mouth of Hell
  Rode the six hundred.

Flash'd all their sabers bare,
Flash'd as they turn'd in air
Sabring the gunners there,
Charging an army, while
  All the world wonder'd:
Plunged in the battery smoke
Right thro' the line they broke;
Cossack and Russian
Reel'd from the saber-stroke
  Shatter'd and sunder'd.
Then they rode back, but not—
  Not the six hundred.

Cannon to right of them,
Cannon to left of them,
Cannon behind them
  Volley'd and thunder'd;
Storm'd at with shot and shell,
While horse and hero fell,
They that had fought so well
Came thro' the jaws of Death,
Back from the mouth of Hell,
All that was left of them,
  Left of six hundred.

When can their glory fade?
O the wild charge they made!
  All the world wonder'd.
Honor the charge they made!
Honor the Light Brigade,
  Noble six hundred!

—*Alfred Tennyson.*

Old Ironsides

Ay, tear her tattered ensign down!
  Long has it waved on high,
And many an eye has danced to see
  That banner in the sky;
Beneath it rung the battle shout,
  And burst the cannon's roar;—
The meteor of the ocean air
  Shall sweep the clouds no more.

Her deck, once red with heroes' blood,
  Where knelt the vanquished foe,
When winds were hurrying o'er the flood,
  And waves were white below,
No more shall feel the victor's tread,
  Or know the conquered knee;
The harpies of the shore shall pluck
  The eagle of the sea!

Oh, better that her shattered hulk
  Should sink beneath the wave;
Her thunders shook the mighty deep,
  And there should be her grave;
Nail to the mast her holy flag,
  Set every threadbare sail,
And give her to the god of storms,
  The lightning and the gale!

—*Oliver Wendell Holmes.*

The Arrow and the Song

I shot an arrow into the air,
It fell to earth, I knew not where;
For, so swiftly it flew, the sight
Could not follow it in its flight.

I breathed a song into the air,
It fell to earth, I know not where;
For who has sight so keen and strong,
That it can follow the flight of song?

Long, long afterward, in an oak
I found the arrow, still unbroke;
And the song, from beginning to end,
I found again in the heart of a friend.

—*Henry W. Longfellow.*